PHASE 1 DESK STUDY REPORT

for the site at

NEW BUILDINGS AT THE VINERY, ARUNDEL ROAD, POLING, WEST SUSSEX BN18 9PY

on behalf of

TRIBUTES LIMITED C/O PAUL AIREY PLANNING ASSOCIATES

Report Reference: GWPR3898/DS/December 2020		Status: FINAL
Issue:	Prepared By:	Verified By:
V1.01 December 2020	[redacted]	
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File Reference: Ground and Water/Project Files/ GWPR3898 New Buildings at the Vinery, Arundel Road, Poling, West Sussex BN18 9PY		

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EXECUTIVE SUMMARY	
Proposed Development	At the time of reporting, December 2020, the proposed development was understood to comprise the erection of a single storey light industrial unit for the storage of coffins with communal soft landscaping in the south-west corner of the site and hardstanding/car parking in the eastern portion of the site. A plan of the proposed development is given in Figure 4.
Geology	The geology map of the British Geological Survey of Great Britain of the Poling area (Chichester and Bognor Sheet No. 317/332) revealed the site to be located on superficial Aeolian Deposits and Undifferentiated River Terrace Deposits overlying the Lambeth Group. No areas of Made Ground or Reworked Ground was noted within a 250m radius.
Hydrogeology and Hydrology	The Desk study has revealed the study area was located on a **Secondary A Aquifer** comprising the superficial Aeolian Deposits and underlying Undifferentiated River Terrace Deposits**.** The bedrock deposits of the Lambeth Group were also classed as a **Secondary A Aquifer**. From analysis of hydrogeological and topographical maps groundwater was anticipated to be encountered at shallow to moderate depth (3 - 6m below existing ground level (bgl)) and it was considered that the groundwater was flowing in a southerly direction across the site, towards the coast. Examination of the Environment Agency records showed that the site fell within a **Flood Zone 1** (an area with a low probability of river or sea flooding). A study of the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed the site was at a moderate risk of flooding due to groundwater emergence and a negligible risk from surface water flooding.
Radon	The site was not located in an area where Radon protection measures were likely to be required.
On-site Sources of Contamination	Potential on-site sources of contamination comprised: • Previous use of the site as a nursery; • Made Ground spread across the western half of the site to raise ground level.
Off-site Sources of Contamination	Potential off-site sources of contamination comprised: • The light industrial estate to the east/north-east occupied by a range of companies including antiques restorers, breweries and car servicing.
Potential On-site Receptors	The potential on-site receptors were: • End users of the site; • Site operatives during demolition and redevelopment; • Maintenance workers; • Building materials and services; • Secondary A Aquifer.
Potential Off-site Receptors	The potential off-site receptors were: • Secondary A Aquifer.
Ground-gas Risk	None identified

The above information must be read in conjunction with the full report.

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1.0 INTRODUCTION

1.1 General

Ground and Water Limited were instructed by Tributes Limited c/o Paul Airey Planning Associates, on the 7th October 2020, to conduct a Desk Study at the proposed new buildings at The Vinery, Arundel Road, Poling, West Sussex BN18 9PY. The scope of the investigation was detailed within the Ground and Water Limited fee proposal ref.: GWQ5775, dated 2h August 2020.

1.2 Aims of the Investigation

This Phase 1 Desk Study was undertaken to advise the client on risk factors pertaining to the site with special reference to former and present-day potential contaminative uses and their impact on sensitive receptors, these being human health, controlled waters, buildings, building materials and services.

1.3 Conditions and Limitations

This report has been prepared based on the terms, conditions and limitations outlined within Appendix A of this report.

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2.0 SITE SETTING

2.1 Site Location

The site comprised a 0.21ha (2125m^2) rectangular plot of land, orientated in a west to east direction, and was located in the southern western corner of the Vinery Industrial Estate. The industrial estate was located on the southern side of the A27 to the north of Poling in West Sussex.

The approximate O.S. National Grid reference for the site is TQ 05050 05574. A site location plan is given within Figure 1. A plan showing the site development area is given within Figure 2.

2.2 Site Description

A Site Walkover was undertaken in November 2020. A description of the site, as noted during the Site Walkover, is tabulated below. An aerial view of the site showing an approximate site boundary is given within Figure 3.

Site Description Sheet: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	
Use of site.	At the time of the Site Walkover, October 2020, the majority of the site comprised open land. A small brick built workshop area and a pair of polytunnels filled with coffins was located in the eastern portion of the site.
Site topography	The site was generally uneven and with a gentle slope to the south. The south-western corner of the site had been raised and was ~1.50 – 2.00m higher than the farmland to the south.
Area topography	The area surrounding the site was generally flat and level with a gentle slope to the south,
Structures on-site	The eastern portion of the site was occupied by a small brick built workshop area and a pair of polytunnels filled with coffins.
Structures off-site and use of surrounding ground	The site was located in an agricultural area with farmland to the south and west, a light industrial estate to the east/north-east and the A27 with woodland beyond to the distant north. The industrial estate had single and double height industrial units and were occupied by a range of companies including antiques restorers, breweries and car servicing.
Boundary features	A ~1.5m high chain link fence on the southern boundary, ~20m high conifers along the western boundary and in the south-east corner and open on the remaining two sides.
Site covering	An area of concrete hardstanding was noted in the north-east corner associated with the polytunnels and along the north-west boundary of the site, with the remainder grass surfaced soft landscaping.
Contamination sources on-site	Made Ground was noted to have been used to raise ground levels in the south-western corner of the site.
Contamination sources off-site	The light industrial estate to the east/north-east occupied by a range of companies including antiques restorers, breweries and car servicing.
Vegetation on-site	~20m high conifers along the western boundary and in the south-east corner
Vegetation off-site	Several trees and bushes were noted to the south.
Services	A drain was known to cross the site in a north to south direction. Services were also assumed to be entering the polytunnels from the east.
Comments	None.

Photographs of the site taken during the Site Walkover are presented in Appendix B.

2.3 Proposed Development

At the time of reporting, December 2020, the proposed development was understood to comprise the erection of a single storey light industrial unit for the storage of coffins with communal soft

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landscaping in the south-west corner of the site and hardstanding/car parking in the eastern portion of the site. A plan of the proposed development is given in Figure 4.

2.4 Geology

The geology map of the British Geological Survey of Great Britain of the Poling area (Chichester and Bognor Sheet No. 317/332) revealed the site to be located on superficial Aeolian Deposits and Undifferentiated River Terrace Deposits overlying the Lambeth Group. No areas of Made Ground or Reworked Ground was noted within a 250m radius.

Aeolian Deposits

Aeolian Deposits comprises a geologically recent deposit of brown structureless sandy clay of limited thickness that usually overlies Undifferentiated River Terrace Deposits in the area of the site. Its name is derived from its former use in the manufacture of bricks. In general the deposits are 2.00m thick but can be up to 3.50m in places.

Undifferentiated River Terrace Deposits

In the south these deposits consist of gravels and sandy gravels, commonly clayey in the higher terraces. In places, clayey and sandy silty and silty clay overlie the aggregate, perhaps an indication of the preservation of overbank or Aeolian Deposits deposits at the top of each fluvial cycle. In general the terrace deposits are up to 6m thick.

Lambeth Group

The Lambeth Group (formerly known as the Woolwich and Reading Beds) is a sedimentary complex comprising a basal bed (the Upnor Formation also known as the Bottom Bed) composed of glauconitic sand, sandy clay and gravel (well-rounded flint pebbles), with laterally variable sand and clay above. In the eastern part of the area the basal bed is mostly overlain by a shelly grey sandy clay or silty sand and laminated beds (Woolwich Formation). At the top of the sedimentary complex is the Reading Formation, which is made up of multi-coloured mottled clays and silty clays.

Lignite, or brown coal, a carbonaceous rock composed of plant remains which has not been subject to the same intensity of heat and pressure as has ordinary coal, is occasionally found within the Lambeth Group, as are individual logs and groups of logs indicating the position of a former log jam, which was covered by sand and clay at the time of deposition.

A BGS borehole record from 1946 to the immediate east of the site revealed ~3.50m of clay (Brickearth) over ~2m of sand and gravel (Brighton Raised Beach) over ~30m of clay (Lambeth Group). These deposits were underlain by chalk. Groundwater was encountered at ~50m and ~55m bgl with a standing water level of 10m bgl in the borehole.

2.5 Hydrogeology and Hydrology

A study of the aquifer maps on the DEFRA website and within the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed the site was located on a **Secondary A Aquifer** comprising the superficial Aeolian Deposits and underlying Undifferentiated River Terrace Deposits**.** The bedrock deposits of the Lambeth Group were also classed as a **Secondary A Aquifer**.

Superficial drift deposits are described as permeable unconsolidated (loose) deposits, e.g. sands and gravels. The bedrock is described as solid permeable formations e.g. sandstone, chalk and limestone.

Secondary aquifers include a wide range of drift deposits with an equally wide range of water permeability and storage capacities. Secondary (A) Aquifers consist of deposits with permeable

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layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as Minor Aquifers.

Examination of the Environment Agency records showed that the site did not fall within a Groundwater Source Protection Zone as classified in the Policy and Practice for the Protection of Groundwater.

A study of the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed that the site was located on a Secondary A Aquifer with a high leaching potential, and that the site was located within a nitrate vulnerable zone.

No active groundwater or surface abstraction licences were within a 250m radius of the site.

The nearest surface water feature to the site was a drain along the western and southern boundaries of the site.

From analysis of hydrogeological and topographical maps groundwater was anticipated to be encountered at shallow to moderate depth (2-6m below existing ground level) and it was considered that the groundwater was flowing in a southerly direction in alignment with the local topography.

Examination of the Environment Agency records showed that the site is located within a **Flood Zone 1,** i.e. an area with a **very low** probability of flooding.

A study of the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed the site was at a moderate risk of flooding due to groundwater emergence and a negligible risk from surface water flooding.

2.7 Radon

BRE 211 (2015) Map 4 of the Hampshire, Berkshire and South Oxfordshire revealed the site **was not** located within an area where mandatory protection measures against the ingress of Radon were likely to be required. The site **was not** located within an area where a risk assessment was required.

Further investigation using [redacted] showed that the site was located within an areas where less than 1% of the homes are estimated to be at or above the Action Level.

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3.0 HISTORICAL REVIEW

3.1 Historical Map Review

The object of this search was to report on the history of the site and its environs from available County Series, Ordnance Survey and Aerial Photography Maps dating from the mid to late 19th Century to the present day and downloaded from Groundsure Environmental Insight. In the following sections dealing with individual maps, only features considered to have a potential contaminative impact on the site and usually within a notional 250 metre radius of the site boundaries are discussed. Any distances quoted for features remote from the site have been scaled from the maps and are only approximate. The north point and approximate extent of the site are indicated on each figure. The historical maps referred to are given within Appendix C. The implications of the map search are discussed later within this report.

Environmental Significance of Data From Historical Maps			
Date	**Scale**	**Site**	**Environs**
1876	1:2,500	The site comprised an open area of undeveloped farmland/fields.	The site was located in an agricultural area with open undeveloped fields/farmland on all sides. Yarmer Barn was noted ~200m to the east. An area of woodland was located ~220m to the north.
1876	1:10.560	As previous map.	As previous map.
1896 - 1899	1:10.560	As previous map.	As previous map.
1897	1:2,500	As previous map.	A pair of semi-detached residential properties had been constructed ~240m to the north-east. Remainder as previous map.
1909	1:10.560	As previous map.	No data to the distant west. Remainder as previous map.
1909	1:10.560	As previous map.	As previous map.
1909 – 1910	1:10.560	As previous map.	As previous map.
1909 – 1910	1:10.560	As previous map.	As previous map.
1912	1:2,500	As previous map.	As previous map.
1937	1:2,500	Three of the greenhouses associated with Worthing Vineries were shown encroaching across the northern boundary of the site. Remainder as previous map.	No data to the distant west of the site. Worthing Vineries comprising 11No. greenhouse was shown to the direct north and north-east of the site. A chimney was shown ~190m to the east. Remainder as previous map.
1938 - 1943	1:10.560	As previous map.	As previous map.
1946	1:10.560	No data	No data to the north, east, south and immediate west of the site. Remainder as previous map.
1957	1:10.560	As previous map.	Two greenhouses had been added to the north-east of the site. Remainder as previous map.
1957	1:10.560	No data	No data to the north, east, south and immediate west of the site. Remainder as previous map.
1971	1:1,2500	A tank associated with the Worthing Vineries was located in the north-west corner of the site. Remainder as previous map.	The east to west A27 dual carriageway had been constructed ~200m to the north. Remainder as previous map.
1972 – 1974	1:2,500	As previous map.	No data to the west. Remainder as previous map.
1974 - 1976	1:10,000	As previous map.	As previous map.
1981	1:10,000	No data	No data.
1992	1:10,000	No data	No data.
1994	1:2,500	The structure to the north extended within the north-west corner of the site. Remainder as previous map.	The greenhouses to the north and north-east had been replaced with two larger structures of a similar shape to those identified during the Site Walkover and the area was renamed The Nurseries. Tanks were shown ~60m and ~90m to the north and three more were shown ~175 – 220m to the north-east. Remainder as previous map.
2001	1:10,000	A rectangular structure was shown extending into the eastern portion of the site from the north in the area of the polytunnels identified during the Site Walkover. Remainder as previous map.	As previous map.
2003	1:1,250	As previous map.	As previous map.
2010	1:10,000	As previous map.	The structures to the north and north-east had been renamed The Vinnery. Remainder as previous map.
2020	1:10,000	As previous map.	Additional structures were shown to the east and south-east associated with the Vinnery. Remainder as previous map.

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4.0 GROUNDSURE DATASHEETS

4.1 GroundSure Datasheets

GroundSure Environmental and Geological Datasheets were obtained for the site. Unless the data indicates a significant risk, only information within a 250m buffer zone has been included. A copy of the GroundSure Datasheets is presented in Appendix D and a summary is provided below.

Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Past Land Use	
Historical Industrial Land Uses	**Two on-site records:** **Vineries on-site (1957);** **Nurseries on-site (1976).**
Historical Tanks	**One on-site and six off-site records within 250m of the site.** **1x unspecified tank on-site (1971 - 1994);** **1x tanks 56m north (1994);** **2x unspecified tank 178 - 212m east (1912, 1994);** **3x unspecified tank 207 - 220m north-east (1937 - 1994).**
Historical Energy Features	No records on-site or within 250m of the site.
Historical Petrol Stations	No records on-site or within 250m of the site.
Historical Garage and Motor Vehicle Repair Features	No records on-site or within 250m of the site.
Historical Military Land	No records on-site or within 250m of the site.
Waste and Landfill Sites	
Active or Recent Landfill	No records on-site or within 250m of the site.
Historic Landfill (BGS records, LA/mapping records and EA/NRW records)	No records on-site or within 250m of the site.
Historical Waste Sites	**One off-site record within 250m of the site.** **1x The Vinery, Arundel Road, Poling 59m north: waste transfer buildings.**
Licensed Waste Sites	**One off-site record within 250m of the site.** **1x The Vinery, Arundel Road, Poling: composting facility – 40000 annual tonnage (expired)**
Waste Exemptions	**Seven off-site records within 250m of the site.** **1x using waste exemption (not on a farm) – The Vinery, Arundel Road, Poling 84m north (use of waste in construction).** **1x treating waste exemption (not on a farm) – The Vinery, Arundel Road, Poling 139m north (recovery of textiles);** **1x storing waste exemption (not on a farm) – The Vinery, Arundel Road, Poling 139m north (storage of waste in secure containers/secure place);** **3x storing waste exemption (non agricultural waste only)— Manor Farm, Poling 189 – 250m south (storage of sludge).**

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Current Land Uses	
Recent Industrial Land-Uses	**One on-site and eighteen off-site records noted within 250m of the site:** **1x tank on-site** **5x tank: 53m north, 84m north, 187m east, 211m north-east and 215m north-east.** **2x alcoholic drinks: 96m east and 153m east.** **2x stone quarrying and preparation: 211m east and 226m east.** **1x clearage and salvage dealers: 84m north.** **1x cleaning equipment and supplies: 160m east.** **1x electronic equipment: 111m east.** **1x garden goods: 117m east.** **1x industrial repairs and servicing: 117m east.** **1x container and storage: 167m north-east.** **1x electricity sub-station: 170m south-east.** **1x vehicle repair, testing and servicing: 180m east.** **1x telecommunications features (mast): 250m east.**
Current or Recent Petrol Stations	No records on-site or within 250m of the site.
Electricity Cables	No records on-site or within 250m of the site.
Gas Pipelines	No records on-site or within 250m of the site.
Sites determined as Contaminated Land	No records on-site or within 250m of the site.
Control of Major Accident Hazards (COMAH)	No records on-site or within 250m of the site.
Regulated Explosive Sites	No records on-site or within 250m of the site.
Hazardous Substance Storage/Usage	No records on-site or within 250m of the site.
Historical Licensed Industrial Activities (IPC)	No records on-site or within 250m of the site.
Licensed Industrial Activities (Part A(1))	No records on-site or within 250m of the site.
Licensed Pollutant Release (Part A(2)/B)	No records on-site or within 250m of the site.
Radioactive Substance Authorisations	No records on-site or within 250m of the site.
Licensed Discharges to Controlled Waters	No records on-site or within 250m of the site.
Pollutant Release to Surface Waters (Red List)	No records on-site or within 250m of the site.
Pollutant Release to Public Sewer	No records on-site or within 250m of the site.
List 1 Dangerous Substances	No records on-site or within 250m of the site.
List 2 Dangerous Substances	No records on-site or within 250m of the site.
Pollution Incidents (EA/NRW)	No records on-site or within 250m of the site.
Pollution Inventory Substances	No records on-site or within 250m of the site.
Pollution Inventory Waste Transfers	No records on-site or within 250m of the site.
Pollution Inventory Radioactive Waste	No records on-site or within 250m of the site.
Hydrogeology	
Superficial Aquifer	**One on-site and two off-site records within 250m of the site:** **1x Secondary A Aquifer on-site;** **1x Secondary A Aquifer 21m west;** **1x Undifferentiated Secondary Aquifer 208m south-east.**
Bedrock Aquifer	**One on-site and three off site records within 250m of the site:** **1x Secondary A Aquifer on-site;** **1x Secondary A Aquifer 21m west;** **2x Unproductive Strata 206m and 208m north.**

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Hydrogeology	
Groundwater Vulnerability	**One on-site and one off site record within 250m of the site:** **1x High Leaching class on-site;** **1x High Leaching class 21m west.**
Groundwater Vulnerability – Soluble Rock Risk	No records on-site or within 250m of the site.
Groundwater Vulnerability – Local Information	No records on-site or within 250m of the site.
Groundwater Abstractions	**Two on-site and two off-site records within 250m of the site.** **1x horticultural watering on-site: southern region groundwater – former Darlington mushroom site poling point 1 (historical);** **1x spray irrigation – direct on-site: southern region groundwater – former Darlington mushroom site poling point 1 (historical)** **1x horticultural watering 153m east: southern region groundwater – former Darlington mushroom site poling point 2 (historical);** **1x spray irrigation – direct 153m east: southern region groundwater – former Darlington mushroom site poling point 2 (historical)**
Surface Water Abstractions	No records on-site or within 250m of the site.
Potable Abstractions	No records on-site or within 250m of the site.
Source Protection Zones	No records on-site or within 250m of the site.
Source Protection Zones (Confined Aquifer)	No records on-site or within 250m of the site.
Hydrology	
Water Network (OS MasterMap)	**One on-site and eight off-site records within 250m of the site.** **1x inland river not influenced by normal tidal fluctuations on-site;** **2x inland river not influenced by normal tidal fluctuations 70m and 99m south;** **6x inland river not influenced by normal tidal fluctuations 162m, 170m, 204m, 209m, 211m and 218m north.**
Surface Water Features	**Nine records on-site or within 250m of the site.** **No details given**
WFD Surface Water Body Catchments	**One on-site record: Black ditch (W Sussex) Catchment (Water Body ID: GB107041012890) – Land area part of the Lower Arun within the Arun and western streams management catchment.**
WFD Surface Water Bodies	No records on-site or within 250m of the site.
WFD Groundwater Bodies	**One on-site record: Sussex Lambeth Group (Water Body ID GB40701G505100: poor overall rating, good chemical rating, poor quantitative rating – 2015)**

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
River and Coastal Flooding	
Risk of Flooding from Rivers and Seas (RoFRaS)	No records on-site or within 250m of the site.
Historical Flood Events	No records on-site or within 250m of the site.
Flood Defences	No records on-site or within 250m of the site.
Areas Benefitting from Flood Defences	No records on-site or within 250m of the site.
Flood Storage Areas	No records on-site or within 250m of the site.
Flood Zone 2	No records on-site or within 250m of the site.
Flood Zone 3	No records on-site or within 250m of the site.
Surface Water Flooding	
Highest Surface Water Flooding Risk On-site	**Negligible**
Highest Surface Water Flooding Risk within 50m of the Site	**1 in 100 year, 0.3 – 1.0m depth**
Groundwater Flooding	
Highest Groundwater Flooding Risk On-site	**Moderate**
Highest Groundwater Flooding Risk within 50m of the Site	**Moderate – High**
Environmental Designations	
Sites of Special Scientific Interest (SSSI)	No records on-site or within 250m of the site.
Conserved Wetland Sites (Ramsar Sites)	No records on-site or within 250m of the site.
Special Areas of Conservation (SACs)	No records on-site or within 250m of the site.
Special Protection Areas (SPAs)	No records on-site or within 250m of the site.
National Nature Reserves (NNR)	No records on-site or within 250m of the site.
Local Nature Reserves (LNR)	No records on-site or within 250m of the site.
Designated Ancient Woodland	**One off-site record within 250m of the site. 1x Ancient Replanted Woodland 209m north.**
Biosphere Reserves	No records on-site or within 250m of the site.
Forest Parks	No records on-site or within 250m of the site.
Marine Conservation Zones	No records on-site or within 250m of the site.
Green Belt	No records on-site or within 250m of the site.
Proposed Ramsar Sites	No records on-site or within 250m of the site.
Possible Special Areas of Conservation (pSACs)	No records on-site or within 250m of the site.
Potential Special Protection Areas (pSPA)	No records on-site or within 250m of the site.
Nitrate sensitive Areas	No records on-site or within 250m of the site.
Nitrate Vulnerable Zones	**One on-site record. Sussex Chalk: groundwater; NVZ ID: G56**
SSSI Impact Risk Zones	**Six on-site records relating to: Infrastructure; air pollution; and combustion.**
SSSI Units	No records on-site or within 250m of the site.
Visual and Cultural Designations	
World Heritage Sites	No records on-site or within 250m of the site.
Areas of Outstanding Natural Beauty (AONB)	No records on-site or within 250m of the site.
National Parks	**One off-site record within 250m of the site. 1x South Downs 200m north.**
Listed Buildings	No records on-site or within 250m of the site.
Conservation Areas	No records on-site or within 250m of the site.
Scheduled Ancient Monuments	No records on-site or within 250m of the site.
Registered Parks and Gardens	No records on-site or within 250m of the site.

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Agricultural Designations	
Agricultural Land Classification	**One on-site and one off-site record within 250m of the site:** **On-site: Grade 2. Very good quality agricultural land** **125m north: non-agricultural.**
Open Access Land	No records on-site or within 250m of the site.
Tree Felling Licences	**One off-site record within 250m of the site.** **209m north: selective fell/thin – ref. 019/505/11-12 (21/03/2012).**
Environmental Stewardship Schemes	No records on-site or within 250m of the site.
Countryside Stewardship Schemes	**One on-site and one off-site record within 250m of the site:** **On-site: Countryside Stewardship (middle tier) ref. 513159 01/01/2018 – 31/12/2022;** **209m north-east: Woodland Management Plan ref. 87766 01/04/2020 – 31/03/2022.**
Habitat Designations	
Priority Habitat Inventory	**Four off-site records within 250m of the site.** **4x Deciduous Woodland 207 – 2016m north.**
Habitat Networks	No records on-site or within 250m of the site.
Open Mosaic Habitat	No records on-site or within 250m of the site.
Limestone Pavement Orders	No records on-site or within 250m of the site.
Geology (1:50,000 scale)	
Artificial and Made Ground	No records on-site or within 250m of the site.
Artificial Ground Permeability	No records on-site or within 250m of the site.
Superficial Geology	**One on-site and one off-site record within north-east; 250m of the site:** **1x River Terrace Deposits (undifferentiated) (sand, silt and clay) on-site;** **1x Head (clay, silt, sand and gravel) 208m south-east.**
Superficial Permeability	**One on-site and one off-site record within 250m of the site.** **1x intergranular flow with low to high permeability on-site;** **1x intergranular flow with low to high permeability 21m west.**
Landslip	No records on-site or within 250m of the site.
Landslip Permeability	No records on-site or within 250m of the site.
Bedrock Geology	**One on-site and one off-site record within north-east; 250m of the site:** **1x Lambeth Group (clay, silt and sand) on-site;** **1x London Clay Formation (clay, silt and sand) 206m north.**
Bedrock Permeability	**One on-site record:** **1x mixed flow with very low to moderate permeability on-site;** **1x mixed flow with very low to moderate permeability 31m west.**
Bedrock Faults and Other Linear Features	No records on-site or within 250m of the site.
Boreholes	
BGS Boreholes	**One on-site and one off-site record within 250m of the site.** **1x Worthing Vineries Poling on-site (55.77m deep);** **1x Worthing Vineries Poling 153m east (60.96m deep).**

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Natural Ground Subsidence – Shrink Swell Clays	
Shrink Swell Clays	**Moderate Risk on-site;** **Moderate Risk 21m west.**
Running Sands	**Low Risk on-site;** **Low Risk 21m west.**
Compressible Soils	**Negligible Risk on-site;** **Negligible Risk 21m west**
Collapsible Deposits	**Low Risk on-site;** **Low Risk 21m west.**
Landslides	**Very Low Risk on-site;** **Very Low Risk 21m west.**
Ground Dissolution of Soluble Rocks	**Negligible Risk on-site;** **Negligible Risk 21m west.**
Mining, Ground Workings and Natural Cavities	
Natural Cavities	No records on-site or within 250m of the site.
BritPits	No records on-site or within 250m of the site.
Surface Ground Workings	No records on-site or within 250m of the site.
Underground Workings	No records on-site or within 250m of the site.
Historical Mineral Planning Areas	No records on-site or within 250m of the site.
Non-coal Mining	**One on-site and one off-site record within 250m of the site.** **1x on-site: sporadic underground mining of chalk may have occurred;** **1x 21m west: sporadic underground mining of chalk may have occurred**
Mining Cavities	No records on-site or within 250m of the site.
JPB Mining Areas	No records on-site or within 250m of the site.
Coal Mining	No records on-site or within 250m of the site.
Brine Areas	No records on-site or within 250m of the site.
Gypsum Areas	No records on-site or within 250m of the site.
Tin Mining	No records on-site or within 250m of the site.
Clay Mining	No records on-site or within 250m of the site.
Radon	
Radon	**One on-site record.** **1x between 1 - 3% of properties affected and no radon measures required.**
Soil Chemistry	
BGS Estimated Background Soil Chemistry	**One on-site and five off-site records within 250m of the site:** **1x on-site** **21m north-west** **21m west** **35m and 42m south** **42m south-west** **Arsenic 15 – 25mg/kg** **Bio accessible arsenic no data** **Lead 100mg/kg** **Bio accessible Lead 60mg/kg;** **Cadmium 1.8mg/kg** **Chromium 60 – 90mg/kg** **Nickel 15 – 30mg/kg**
BGS Estimated Urban Soil Chemistry	No records on-site or within 250m of the site.
BGS Measured Urban Soil Chemistry	No records on-site or within 250m of the site.

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Environmental Significance of Data Search	
Source	**Type/On site or nearest distance from site/date**
Railway Infrastructure and Projects	
Underground Railways (London)	No records on-site or within 250m of the site.
Underground Railways (Non-London)	No records on-site or within 250m of the site.
Railway Tunnels	No records on-site or within 250m of the site.
Historical Railway and Tunnel Features	No records on-site or within 250m of the site.
Royal Mail Tunnels	No records on-site or within 250m of the site.
Historical Railways	No records on-site or within 250m of the site.
Railways	No records on-site or within 250m of the site.
Crossrail 1	No records on-site or within 250m of the site.
Crossrail 2	No records on-site or within 250m of the site.
HS2	No records on-site or within 250m of the site.

5.0 PLANNING DATABASE AND ONLINE REVIEW

5.1 Online Planning Database

A review of the Arun District Council Planning Database revealed one planning application had been filed for the site.

Planning Applications on the Arun District Council Planning Database			
Application No./ Date	**Address**	**Proposed**	**Decision**
A/121/20/PL 07/08/2020	The Vinery Arundel Road Poling BN18 9PY	Variation of condition 2-plans condition following A/177/19/PL for revised 'Proposed Site Layout Plan-Block Plan, Proposed Ground Floor Plan, Proposed First Floor Plan, Proposed Elevation Sheet 1, Proposed Elevation Sheet 2, Drainage Layout, Birds Eye View, Perspective View Looking North East and Perspective View Looking West.	Approve Conditionally

5.2 Previous Investigations

A previous Ground Investigation was undertaken by Ground and Water Limited during March 2020 (Ground and Water Ground Investigation Report Ref.: GWPR3637, dated May 2020). Site works were undertaken on the 25th March 2020 and comprised the machine excavation of four trial pits (TP1 – TP4) to a depth of between 2.00m bgl in TP4 and 2.70m bgl in TP2. Infiltration testing in accordance with the principles of BRE365 was undertaken in TP3. Temporary groundwater monitoring standpipes were installed to a depth of 2.50m bgl in TP1 and 2.00m bgl in TP4.

The ground conditions encountered within the trial holes was generally as anticipated from examination of the geology map. A capping of Made Ground was noted from ground level to a depth of between 0.30 – 1.50m bgl overlying the soils of the Aeolian Deposits for the remaining depth of TP2 at 2.70m bgl and to a proved depth of 1.75m bgl in TP1, 2.45m bgl in TP3 and 1.90m bgl in TP4. The soils generally comprised a brown and orange mottled very silty clay.

Soils described as the Undifferentiated River Terrace Deposits were encountered underlying the Aeolian Deposits for the remaining depth of TP1 at 2.50m bgl, TP3 at a depth of 2.60m bgl and TP4 at a depth of 2.00m bgl. The soils generally comprised an orange brown and grey brown mottled (in TP1) and brown and green brown mottled (TP3 and TP4) slightly gravelly to gravelly, slightly sandy to sandy clay. The sand was fine to coarse grained and the gravel was angular to sub-rounded, fine to coarse flint.

Seepages of groundwater were encountered at 2.50m bgl in TP1 and 1.50m bgl in TP3 during the intrusive investigation. Groundwater was not encountered in the remaining trial holes. A standing groundwater level of 1.45m and 1.35m bgl was recorded in the standpipes installed within TP1 and TP4 respectively on 1st April 2020. This was considered to be perched water within more granular bands within the Aeolian Deposits accumulating within a standpipe installed with predominantly cohesive soils rather than a true reflection of the actual groundwater levels.

No other reports of previous Desk Studies and Ground Investigations were available for the site at the time of the preparation of this Desk Study.

5.3 BGS Borehole Geoindex

A BGS borehole record from 1946 to the immediate east of the site revealed ~3.50m of clay (Brickearth) over ~2m of sand and gravel (Brighton Raised Beach) over ~30m of clay (Lambeth

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Group). These deposits were underlain by chalk. Groundwater was encountered at ~50m and ~55m bgl with a standing water level of 10m bgl in the borehole.

5.4 Internet Search

An internet search revealed no additional information pertinent to this Desk Study.

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6.0 PHASE 1 RISK ASSESSMENT

6.1 Conceptual Site Model

A tabular Conceptual Site Model (CSM) for the site can be seen in Section 7.8 of this report. A diagrammatic representation of the model can be seen in Figure 5 of this report.

6.2 Contaminant Source-Pathway-Receptor Model

In the UK, the assessment of risk from contamination follows the source-pathway-receptor (SPR) approach. For an environmental risk to be present there must be a source of contamination, a receptor or receptors, and a pathway for contaminants to migrate or be absorbed. If one of these three elements are absent, it is considered that there is no risk of harm. If, however, there is a linkage between any given source and any given receptor, then a risk-based approach is used to assess the significance or impact of the pollutant linkage.

The Phase 1 Desk Study has revealed potential on-site and off-site sources of contamination, which are summarised in this section of the report. Additional potential sources of contamination, identified within the Desk Study have been discounted based on the absence of a realistic SPR linkage (i.e. the distance from the site or the nature or age of any potential contamination sources).

For ease of reference and understanding, the risks have been assigned within this risk assessment against four possible levels / categories:

- **Negligible** - Regarding this potential SPR linkage, the site is considered suitable for the proposed end-use and there is no risk to environmental receptors. Therefore, there is no need to further assess this potential source of contamination.
- **Low risk –** Regarding this potential SPR linkage, the site is considered suitable for the proposed end-use and there is not considered to be a risk to environmental receptors. However, it is considered that further investigation to confirm this is recommended.
- **Moderate risk** – Regarding this potential SPR linkage, the site may not be suitable for the proposed end-use and there may be a risk to environmental receptors. Further investigation is required to confirm this.
- **High risk** – Regarding this potential SPR linkage, site probably or certainly not suitable for proposed end-use and there is likely to be a risk to environmental receptors. Contaminants probably or certainly present and very likely to have an unacceptable impact on key targets. Urgent action required in the short term.

6.3 Potential On-site Sources of Contaminants

The Phase 1 Desk Study revealed the following potential on-site sources of contamination within the study area.

- The study of the earliest historical map with available data (1876) revealed that the site comprised an open area of undeveloped farmland/fields. By 1937, three of the greenhouses associated with Worthing Vineries were shown encroaching across the northern boundary of the site. By the 1994 historic map, following redevelopment of the Worthing Vineries the structure to the north extended south into the north-west corner of the site. By 2001, a rectangular structure was shown extending into the eastern portion of the site from the north in the area of the polytunnels identified during the Site Walkover.

  At the time of the Site Walkover, October 2020, the majority of the site comprised open

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land. A small brick built workshop area and a pair of polytunnels filled with coffins was located in the eastern portion of the site. site was generally uneven and with a gentle slope to the south. The south-western corner of the site had been raised and was ~1.50 – 2.00m higher than the farmland to the south possible using demolition debris from the former greenhouses to the north.

The Groundsure Datasheets, presented in Appendix D of this report, revealed two on-site historical industrial land uses comprising: 1x vineries (1957) and 1x nurseries (1976).

Sporadic use of pesticides and herbicides may have occurred within the vineries and nurseries; however, they were redeveloped~25 years ago so it was considered there was a low risk that there would be significant quantities remnants of these chemicals left in the near surface soils.

Construction and demolition activities were likely to have created a capping of Made Ground containing demolition debris. Building materials used in the early 20th Century may have included asbestos for partitions and insulative lagging. Lead, cadmium and other heavy metal based paints may also have been used. Given that the buildings in a close proximity to and encroaching within the site have had significant changes/alterations in their layout and configuration and site levels appeared to have been raised since that time at the southern end of the site, the likelihood of fill having been imported to the site was considered to be moderate and these potential sources of contamination could not be dismissed.

Given the age of the structures standing and previously demolished, an **Asbestos Management Strategy** should be put in place to ensure that any potentially asbestos containing materials are identified and removed from site in a suitable manner to prevent cross-contamination.

- By 1971, a tank associated with the Worthing Vineries was located in the north-west corner of the site.

The Groundsure Datasheets, presented in Appendix D of this report, revealed one on-site historical tank and one recent industrial land use was recorded, both comprising 1x unspecified tank (1971 – 1994).

Given the likely size of the tank that it was most likely to have been a fuel or heating oil tank, consequently any spills or leaks would be localised around the tank only and given the time since its removal (~25 years), it was considered unlikely that there would be significant quantities remnants of these chemicals left in the near surface soils and this potential source of contamination was dismissed.

No other potential on-site sources of contamination are thought to be present on the site.

6.4 Potential Off-site Sources of Contaminants

The Phase 1 Desk Study revealed the following potential off-site sources of contamination (<250m radius from the proposed drainage field location) likely to affect the proposed development:

- The study of the earliest historical map (1876) revealed the site was located in an agricultural area with open undeveloped fields/farmland on all sides. By the 1937 historical

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map, Worthing Vineries comprising 11No. greenhouse was shown to the direct north and north-east of the site. A chimney was shown ~190m to the east. By 1957, a further two greenhouses had been added to the north-east.

By the 1994 historic map, the greenhouses to the north and north-east had been replaced with two larger structures of a similar shape to those identified during the Site Walkover and the area was renamed The Nurseries. Tanks were shown ~60m and ~90m to the north and three more were shown ~175 – 220m to the north-east.

Sporadic use of pesticides and herbicides may have occurred within the greenhouses and nurseries; however, they were redeveloped ~25 years ago so it was considered a low risk that there would be remnants of these chemicals left in the near surface soils.

Construction and demolition activities were likely to have created a capping of Made Ground containing demolition debris. Building materials used in the early 20th Century may have included asbestos for partitions and insulative lagging. Lead, cadmium and other heavy metal based paints may also have been used. Given that the buildings in a close proximity to and encroaching within the site have had significant changes/alterations in their layout and configuration and site levels appeared to have been raised since that time at the southern end of the site, the likelihood of fill having been imported to the site was considered to be moderate and these potential sources of contamination could not be dismissed.

- The Site Walkover revealed a light industrial estate to the east/north-east of the site. The industrial estate had single and double height industrial units and were occupied by a range of companies including antiques restorers, breweries and car servicing.

  The Groundsure Datasheets, presented in Appendix D of this report, revealed eighteen off-site records of a current industrial site within a 250m radius including: 2x alcoholic drinks: 96m east and 153m east; 2x stone quarrying and preparation: 211m east and 226m east; 1x clearage and salvage dealers: 84m north; 1x cleaning equipment and supplies: 160m east; 1x electronic equipment: 111m east; 1x garden goods: 117m east; 1x industrial repairs and servicing: 117m east; 1x container and storage: 167m north-east; 1x vehicle repair, testing and servicing: 180m east; and 1x telecommunications features (mast): 250m east.

  Given that the buildings in a close proximity to and encroaching within the site have had significant changes/alterations in their layout and configuration and site levels appeared to have been raised since that time at the southern end of the site, the likelihood of fill having been imported to the site was considered to be moderate and these potential sources of contamination could not be dismissed.

- By the 1994 historic map, tanks were shown ~60m and ~90m to the north and three more were shown ~175 – 220m to the north-east associated with the vineries/nurseries.

  The Groundsure Datasheets, presented in Appendix D of this report, revealed six off-site historical tanks were recorded within a 250m radius comprising: 1x tank 56m north (1994); 2x unspecified tanks 178 - 212m east (1912, 1994); and 3x unspecified tank 207 – 220m north-east (1937 – 1994). The datasheets also recorded five off-site recent industrial land uses including: 5x tank: 53m north, 84m north, 187m east, 211m north-east and 215m north-east.

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Given the likely size of the tanks they were most likely to have been a fuel or heating oil tanks, consequently any spills or leaks would be localised around the tanks only, consequently, it was considered unlikely that there would be significant quantities remnants of these chemicals left in the near surface soils and these potential sources of contamination were dismissed.

- The Groundsure Datasheets, presented in Appendix D of this report, revealed eighteen off-site records of a current industrial site within a 250m radius including: 1x electricity sub-station 170m south-east.

  Potential contaminants comprise polychlorinated biphenyls (PCB's). Because of the limited mobility of the PCB's, contamination is likely to be localised around the area of release unless disturbed by demolition, clearance or site redevelopment. Consequently, given its distance from the site, this potential source of contamination could be dismissed.

6.5 Potential Pathways for Contaminant Migration from Off-site Sources

Anthropogenic (or artificial) pathways for contaminant migration can be present in the form of land drains etc. Leaking sewage supply pipes and site drainage could also provide pathways for potential contaminant migration. Granular backfill to trenches for cables, gas pipes, water pipes etc. can also provide pathways for movement of mobile contaminants and contaminated groundwater.

The geology map of the British Geological Survey of Great Britain of the Poling area (Chichester and Bognor Sheet No. 317/332) revealed the site to be located on superficial Aeolian Deposits and Undifferentiated River Terrace Deposits overlying the Lambeth Group. No areas of Made Ground or Reworked Ground was noted within a 250m radius.

A previous Ground Investigation was undertaken by Ground and Water Limited during March 2020 (Ground and Water Ground Investigation Report Ref.: GWPR3637, dated May 2020 revealed a capping of Made Ground from ground level to a depth of between 0.30 – 1.50m bgl overlying the soils of the Aeolian Deposits for the remaining depth of TP2 at 2.70m bgl and to a proved depth of 1.75m bgl in TP1, 2.45m bgl in TP3 and 1.90m bgl in TP4. The soils generally comprised a brown and orange mottled very silty clay.

Soils described as the Undifferentiated River Terrace Deposits were encountered underlying the Aeolian Deposits for the remaining depth of TP1 at 2.50m bgl, TP3 at a depth of 2.60m bgl and TP4 at a depth of 2.00m bgl. The soils generally comprised an orange brown and grey brown mottled (in TP1) and brown and green brown mottled (TP3 and TP4) slightly gravelly to gravelly, slightly sandy to sandy clay. The sand was fine to coarse grained and the gravel was angular to sub-rounded, fine to coarse flint.

Seepages of groundwater were encountered at 2.50m bgl in TP1 and 1.50m bgl in TP3 during the intrusive investigation. Groundwater was not encountered in the remaining trial holes. A standing groundwater level of 1.45m and 1.35m bgl was recorded in the standpipes installed within TP1 and TP4 respectively on 1st April 2020. This was considered to be perched water within more granular bands within the Aeolian Deposits accumulating within a standpipe installed with predominantly cohesive soils rather than a true reflection of the actual groundwater levels.

The natural deposits of the Undifferentiated River Terrace Deposits were considered to act as a potential pathway for contaminants/ground-gas to migrate given their low to high intergranular

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permeability and the underlying Lambeth Group was considered to act as a potential pathway for contaminants/ground-gas to migrate given its very low to moderate mixed permeability.

Any potential Made Ground soils are also likely to act as a migration pathway for contaminants. Surface water runoff of contaminants is a potential migration pathway.

6.6 Potential Receptors

Human Health

At the time of reporting, December 2020, the proposed development was understood to comprise the erection of a single storey light industrial unit for the storage of coffins with communal soft landscaping in the south-west corner of the site and hardstanding/car parking in the eastern portion of the site. A plan of the proposed development is given in Figure 4.

The Human Health receptors are considered to be the end-users of the site, the site operatives during demolition, redevelopment and ongoing maintenance.

Groundwater

The Desk Study has revealed the study area was located on a **Secondary A Aquifer** comprising the superficial Aeolian Deposits and underlying Undifferentiated River Terrace Deposits**.** The bedrock deposits of the Lambeth Group were also classed as a **Secondary A Aquifer**.

Examination of the Environment Agency records showed that the site did not fall within a Groundwater Source Protection Zone as classified in the Policy and Practice for the Protection of Groundwater.

A study of the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed that the site was located on a Secondary A Aquifer with a high leaching potential, and that the site was located within a nitrate vulnerable zone.

No active groundwater or surface abstraction licences were within a 250m radius of the site.

The nearest surface water feature to the site was a drain along the western and southern boundaries of the site.

From analysis of hydrogeological and topographical maps groundwater was anticipated to be encountered at shallow to moderate depth (2-6m below existing ground level) and it was considered that the groundwater was flowing in a southerly direction in alignment with the local topography.

Examination of the Environment Agency records showed that the site is located within a **Flood Zone 1,** i.e. an area with a **very low** probability of flooding.

A study of the GroundSure Environmental Insight Report, presented in Appendix D of this report, revealed the site was at a moderate risk of flooding due to groundwater emergence and a negligible risk from surface water flooding.

The potential receptors are presented below and comprise:

- Secondary A Aquifers directly underlying the site.

Building Materials

As part of the development building materials will be placed in contact with potential aggressive ground conditions caused through either natural or anthropogenic sources. In addition, services will be buried within the ground and will be subjected to similar ground conditions. Buildings and services have the potential to generate confined spaces that could be significant.

Vegetation

The site was proposed to have areas of soft landscaping / vegetation post redevelopment. Any vegetation will be subjected to specific contaminants within the ground through numerous pathways.

6.7 Contaminant Absorption Pathways

At the time of reporting, December 2020, the proposed development was understood to comprise the erection of a single storey light industrial unit for the storage of coffins with communal soft landscaping in the south-west corner of the site and hardstanding/car parking in the eastern portion of the site. A plan of the proposed development is given in Figure 4.

The potential pathways for contaminant absorption by receptors are as follows:

Human Health:

- Direct ingestion of soil and soil derived dust;
- Dermal contact of impacted soil and soil derived dust;
- Dermal contact of impacted groundwater;
- Ingestion of soil and groundwater with elevated concentration of determinands;
- Inhalation of impacted dust (indoors and outdoors) with elevated concentration of determinands;
- Inhalation of volatiles (indoors and outdoors) with elevated concentrations of determinants.

Groundwater:

- Via anthropogenic pathways;
- Via Topsoil/Made Ground, Aeolian Deposits, Undifferentiated River Terrace Deposits and Lambeth Group;
- Surface water run off

Building Materials and Services

- Direct contact;
- Explosion.

Vegetation

- Direct uptake of impacted groundwater;
- Direct uptake of contaminants within soils;
- Exposure to aggressive ground conditions.

The tabulated Conceptual Site Model developed by this Desk Study can be seen overpage:

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Tabulated Conceptual Site Model – Pollutant Linkage Summary			
Potential On-site Sources	**Potential Absorption Pathways**	**Potential Receptors**	**Risk Classification**
Contaminants introduced on-site by historic use of the site as a nursery and construction activities. • Heavy metals & semi-metals (incl. Arsenic, Cadmium, Chromium, Lead etc); • Combustion products (PAH's, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene); • Organic compounds (fuel oils, ash, tar); • Asbestos (building material, pipe lagging): • Perticides and herbicides.	**Human Health** • Direct ingestion of soil and soil derived dust • Dermal contact of soil and soil derived dust • Ingestion of soil and groundwater with elevated concentration of determinands • Dermal contact with impacted soils and groundwater • Inhalation of impacted dust with elevated concentration of determinands • Inhalation of vapours	**Human Health** • Construction workers. • Future site residents/visitors. • Neighbours and public.	Low
	Groundwater • Surface water runoff • Anthropogenic (man-made) pathways • Vertical and lateral migration in permeable strata	**Groundwater** • Secondary A Aquifer (Undifferentiated River Terrace Deposits and Lambeth Group) underlying the site.	Low
	Vegetation Direct uptake of impacted water	**Vegetation** • Vegetation within residential soft landscaping. • Vegetation within Public open space.	Low
Aggressive ground conditions with Made Ground and natural ground; • Sulphates • PAH, TPH	**Building Materials and Services** • Direct contact with aggressive ground conditions	**Building Materials and Services** • Buried concrete. • Underground services (water supply pipes)	Moderate

[redacted]

Tabulated Conceptual Site Model – Pollutant Linkage Summary			
Potential Off-site Sources	**Potential Absorption Pathways**	**Potential Receptors**	**Risk Classification**
Contaminants introduced on-site by historic use of the site as a nursery and construction activities. • Heavy metals & semi-metals (incl. Arsenic, Cadmium, Chromium, Lead etc); • Combustion products (PAH's, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene); • Organic compounds (fuel oils, ash, tar); • Asbestos (building material, pipe lagging): • Perticides and herbicides.	**Human Health** • Direct ingestion of soil and soil derived dust • Dermal contact of soil and soil derived dust • Ingestion of soil and groundwater with elevated concentration of determinands • Dermal contact with impacted soils and groundwater • Inhalation of impacted dust with elevated concentration of determinands Inhalation of vapours	**Human Health** • Construction workers. • Future site residents/visitors. • Neighbours and public.	Low
	Groundwater • Surface water runoff • Anthropogenic (man-made) pathways • Vertical and lateral migration in permeable strata	**Groundwater** • Secondary A Aquifer (Undifferentiated River Terrace Deposits and Lambeth Group) underlying the site.	Low
	Vegetation Direct uptake of impacted water	**Vegetation** • Vegetation within residential soft landscaping. • Vegetation within Public open space.	Low

[redacted]

6.9 Recommendations/Phase 2 Objectives

This section of the report will present recommendations for the further investigation of each plausible pollutant linkage identified by the Conceptual Site Model.

Soils:

An intrusive investigation should be considered in order to determine whether or not potential contaminants of concern are present within the soils underlying the site.

On the basis of the Phase 1 Site Assessment the following contaminants of concern have been identified:

- Semi-metals and heavy metals incl. Arsenic, Cadmium, Chromium (incl. Hexavalent Chromium), Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc;
- Asbestos (fibrous material screen and identification if suspected material encountered);
- Polycyclic Aromatic Hydrocarbons (PAH's) incl. Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(ghi)perylene;
- BTEX Compounds, including MTBE (used as marker compounds for VOCs);
- Fuel Oils – Speciated TPH including full aliphatic/aromatic split;
- Pesticides/herbicides.

The list above does not imply that these chemicals are present on-site or that they are likely to cause contamination issues at the site. The sampling and testing strategy must be in line with current standards.

An **Asbestos Management Strategy** should be put in place so that any potentially asbestos containing materials are identified and removed from site in a suitable manner to prevent cross-contamination. An asbestos survey of any buildings on site prior to demolition should be undertaken.

Groundwater:

If analytical results show elevated concentrations of contaminants of concern in the soil samples then there might be a requirement to assess the potential risks of surface water runoff containing such contaminants migrating into the groundwater underlying the site. This might mean leachate testing on soils samples is required.

Ground-gas:

Since there were potential on-site or off-site sources and deep Made Ground was not anticipated to be encountered, ground-gas was considered to pose no risk to the site.

6.10 Discovery Strategy

There may be areas of contamination that have not been identified during the course of the Desk Study. For example, there may have been underground storage tanks (UST's) not identified during the Desk Study for which there is no historical or contemporary evidence. Such occurrences may be discovered during the investigation for the redevelopment of the site.

Groundworkers should be instructed to report to the Site Manager any evidence for such contamination; this may comprise visual indicators, such as fibrous materials within the soil,

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discolouration, or odours and emission. Upon discovery advice must be taken from a suitably qualified person before proceeding, such that appropriate remedial measures and health and safety protection may be applied.

Should a new source of contamination be suspected or identified then the Local Authority will need to be informed.

6.11 Geotechnical Considerations

No significant geotechnical risks have been identified at the site.

The BGS have identified: a negligible risk associated with the ground dissolution of soluble rocks and of compressible deposits; a very low risk of landslides and of collapsible deposits; a low risk of running sands; and a moderate risk of shrink swell clays.

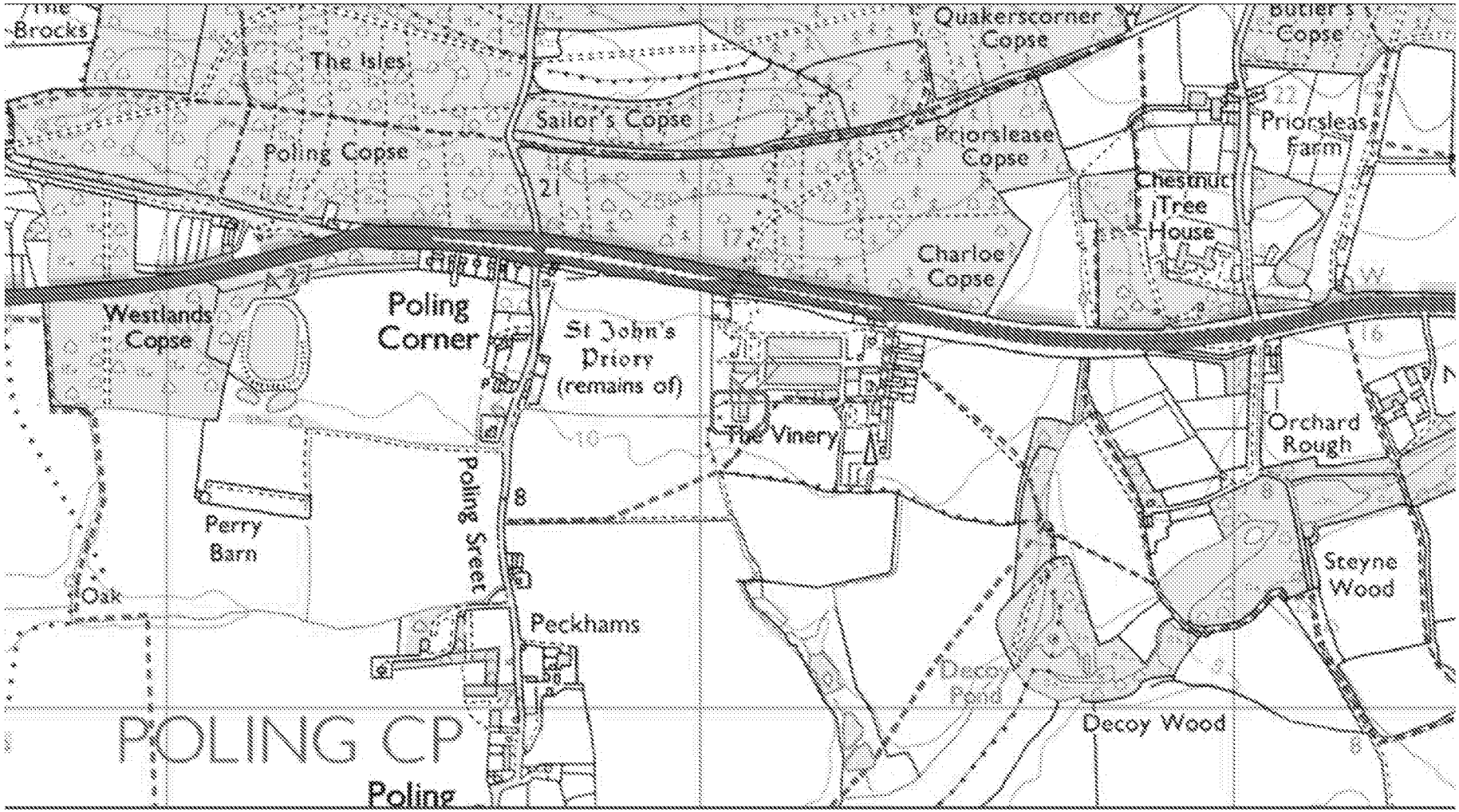
A review of the data available on [redacted] did not reveal any features of concern (e.g. potential infilled ground or potential dissolution features).

No pits/quarrying or mining features were identified within the site's environs or onsite from the historical mapping or the site walkover. It was not considered that there has been any history of mining/quarrying onsite or elsewhere within the site's environs.

When designing foundations, the potential presence of aggressive ground conditions should be taken into consideration. Further investigation may be required in accordance with the guidance established in BRE Special Digest 1 (SD1) (2005) 'Concrete in aggressive ground'.

It is recommended that as part of the ground investigation on site, geotechnical testing is undertaken to determine the underlying ground conditions and to evaluate any geotechnical related risks associated with the proposed redevelopment of the site.

[redacted]
ARUN DISTRICT CO



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	**Figure 1**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020
Site Location Plan	**Ref:** GWPR3898

ground&water



APPROXIMATE SITE BOUNDARY

NOT TO SCALE

Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	**Figure 2**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020
Site Development Area	**Ref:** GWPR3898

ground&water

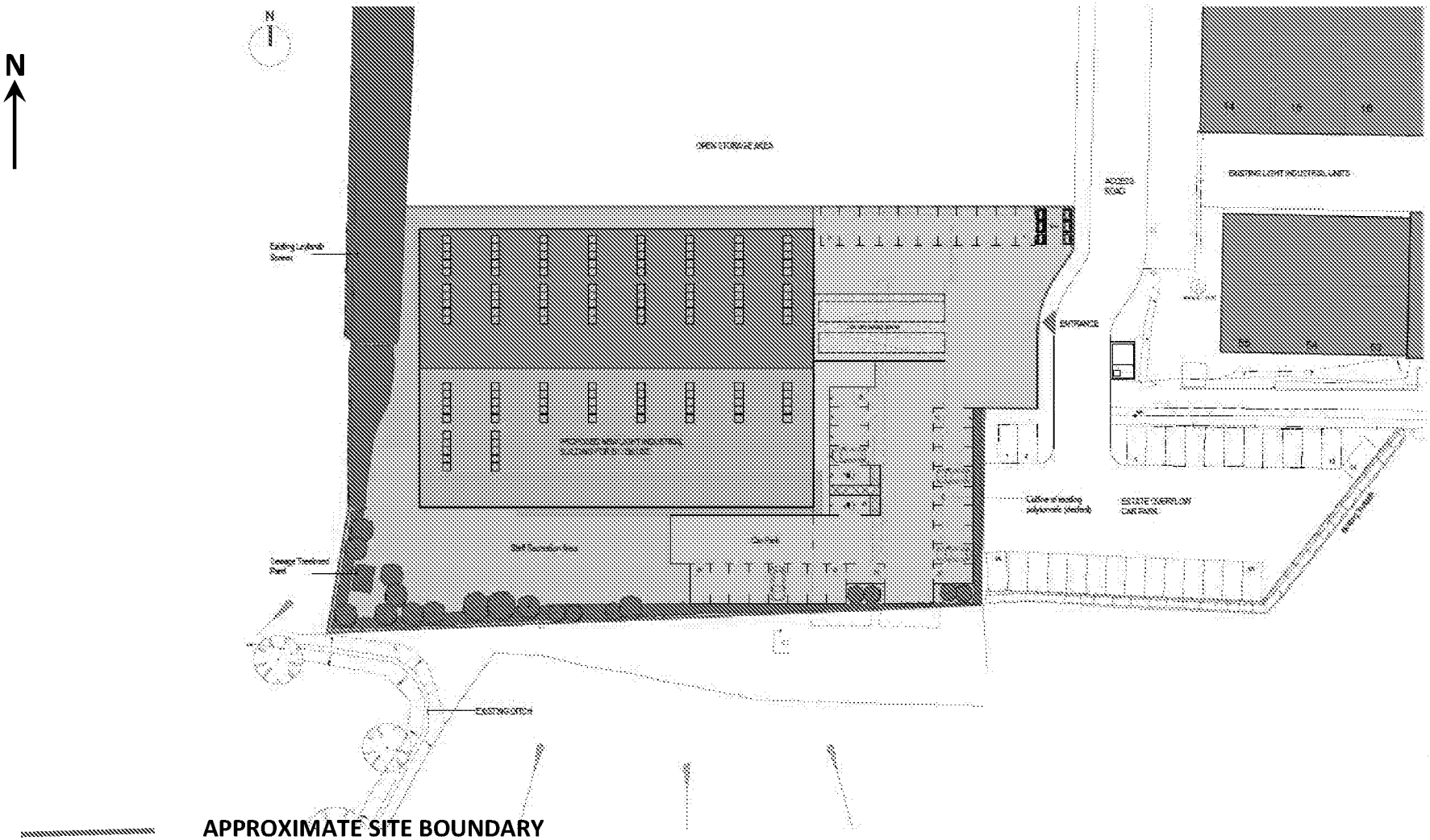


APPROXIMATE SITE BOUNDARY

NOT TO SCALE

Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	**Figure 3**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020
Aerial View of the Site	**Ref:** GWPR3898

ground&water

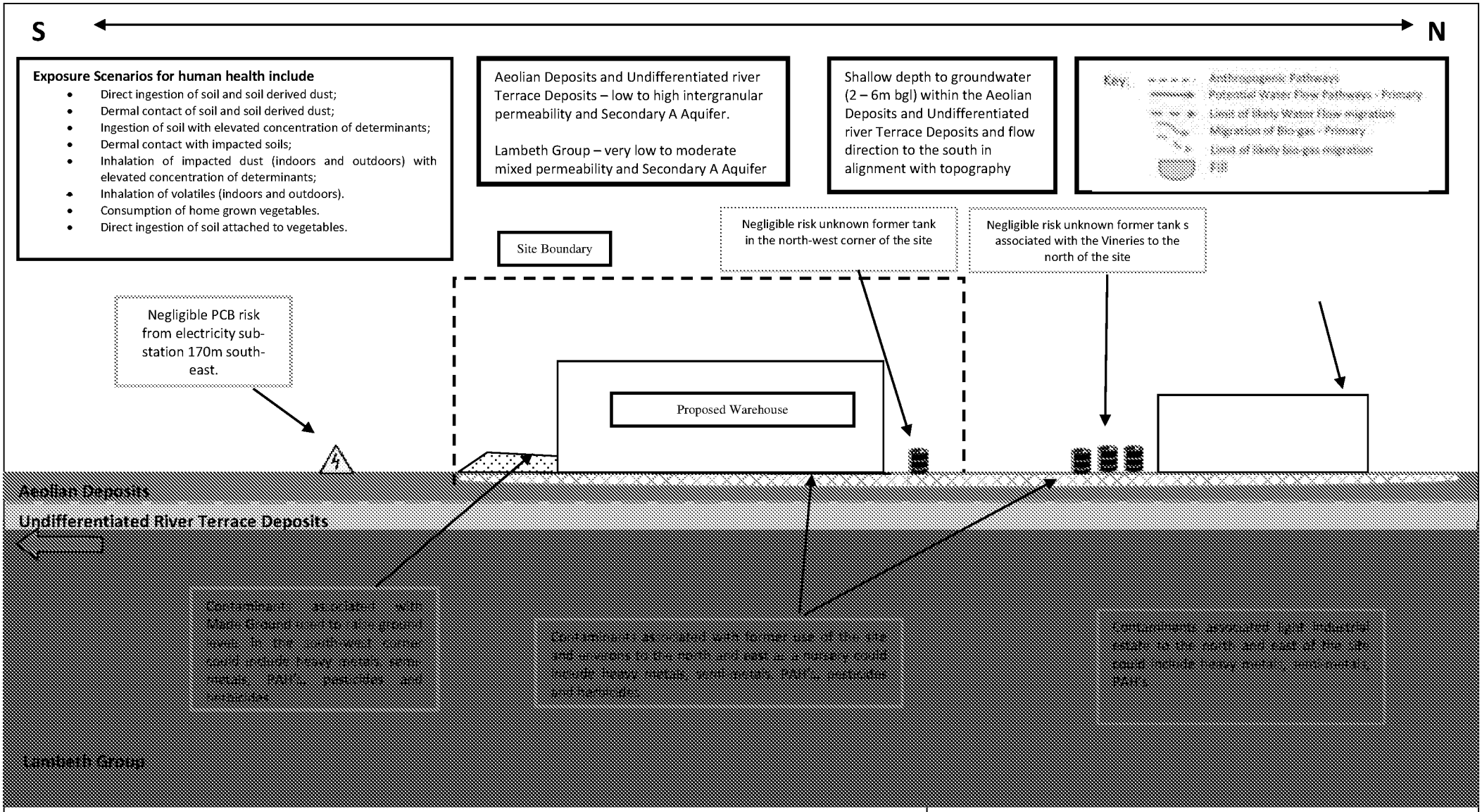


APPROXIMATE SITE BOUNDARY

NOT TO SCALE

Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	**Figure 4**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020
Proposed Development Plan	**Ref:** GWPR3898

ground&water



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY	**Figure 5**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020
Diagrammatic Conceptual Site Model	**Ref:** GWPR3898

ground&water

ARUN DISTRICT COUNCIL A/97/21/DOC

APPENDIX A
Conditions and Limitations

The ground is a product of continuing natural and artificial processes. As a result, the ground will exhibit a variety of characteristics that vary from place to place across a site, and also with time. Whilst a ground investigation will mitigate to a greater or lesser degree against the resulting risk from variation, the risks cannot be eliminated.

The report has been prepared on the basis of information, data and materials which were available at the time of writing. Accordingly any conclusions, opinions or judgements made in the report should not be regarded as definitive or relied upon to the exclusion of other information, opinions and judgements.

The investigation, interpretations, and recommendations given in this report were prepared for the sole benefit of the client in accordance with their brief; as such these do not necessarily address all aspects of ground behaviour at the site. No liability is accepted for any reliance placed on it by others unless specifically agreed in writing.

Any decisions made by you, or by any organisation, agency or person who has read, received or been provided with information contained in the report ("you" or "the Recipient") are decisions of the Recipient and we will not make, or be deemed to make, any decisions on behalf of any Recipient. We will not be liable for the consequences of any such decisions.

Current regulations and good practice were used in the preparation of this report. An appropriately qualified person must review the recommendations given in this report at the time of preparation of the scheme design to ensure that any recommendations given remain valid in light of changes in regulation and practice, or additional information obtained regarding the site.

Any Recipient must take into account any other factors apart from the Report of which they and their experts and advisers are or should be aware. The information, data, conclusions, opinions and judgements set out in the report may relate to certain contexts and may not be suitable in other contexts. It is your responsibility to ensure that you do not use the information we provide in the wrong context.

This report is based on readily available geological records, the recorded physical investigation, the strata observed in the works, together with the results of completed site and laboratory tests. Whilst skill and care has been taken to interpret these conditions likely between or below investigation points, the possibility of other characteristics not revealed cannot be discounted, for which no liability can be accepted. The impact of our assessment on other aspects of the development required evaluation by other involved parties.

The opinions expressed cannot be absolute due to the limitations of time and resources within the context of the agreed brief and the possibility of unrecorded previous in ground activities. The ground conditions have been sampled or monitored in recorded locations and tests for some of the more common chemicals generally expected. Other concentrations of types of chemicals may exist. It was not part of the scope of this report to comment on environment/contaminated land considerations.

The conclusions and recommendations relate to GWPR3675 Former Police Station, 107-111 North

[redacted]

Road, Lancing, West Sussex BN15 9BB.
Trial hole is a generic term used to describe a method of direct investigation. The term trial pit, borehole or window sampler borehole implies the specific technique used to produce a trial hole.

The depth to roots and/or of desiccation may vary from that found during the investigation. The client is responsible for establishing the depth to roots and/or of desiccation on a plot-by-plot basis prior to the construction of foundations. Where trees are mentioned in the text this means existing trees, recently removed trees (approximately 15 years to full recovery on cohesive soils) and those planned as part of the site landscaping.

Ownership of copyright of all printed material including reports, laboratory test results, trial pit and borehole log sheets, including drillers log sheets, remain with Ground and Water Limited. Licence is for the sole use of the client and may not be assigned, transferred or given to a third party.

Only our client may rely on this report and should this report or any information contained in it be provided to any third party we accept no responsibility to the third party for the contents of this report save to the extent expressly outlined by us in writing in a reliance letter addressed from us to the third party.

Recipients are not permitted to publish this report outside of their organisation without our express written consent.

[redacted]

APPENDIX B
Site Photographs

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Photograph 1: View looking west along the northern boundary.



Photograph 2: View looking south along the western boundary.



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY		**Plate 1:**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020	
Appendix B: Site Photographs	**Ref:** GWPR3898	

Photograph 3: View looking east across the centre of the site towards the polytunnels containing coffins.



Photograph 4: View looking west along the southern boundary.



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY		**Plate 2:**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020	
Appendix B: Site Photographs	**Ref:** GWPR3898	

Photograph 5: View looking east along the southern boundary to the rear of the polytunnels.

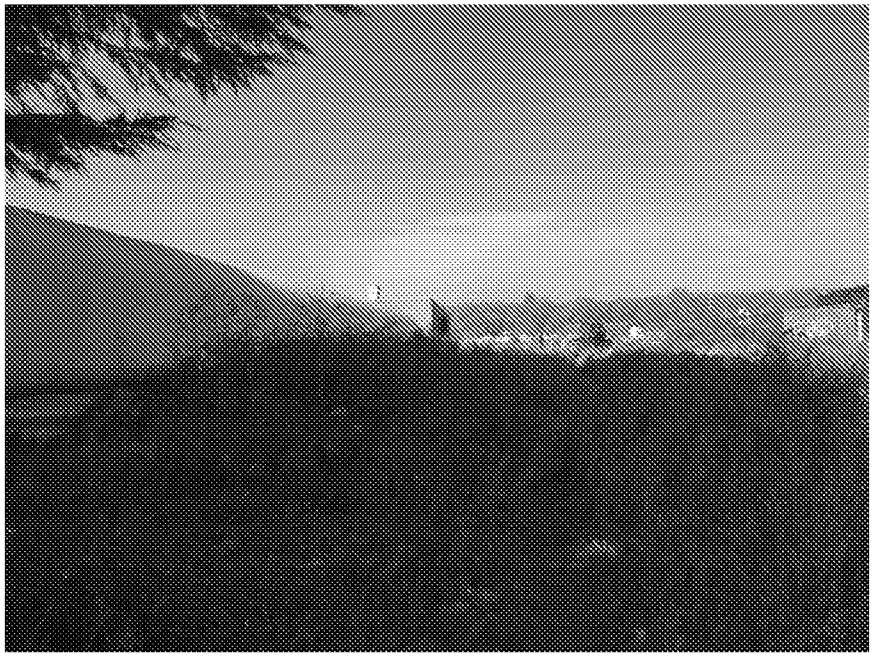


Photograph 6: View looking north-west across the site from the south-east corner.



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY		**Plate 3:**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020	
Appendix B: Site Photographs	**Ref:** GWPR3898	

Photograph 7: View looking north along the eastern boundary.



Photograph 8: View looking west along the northern boundary.



Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY		**Plate 4:**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020	
Appendix B: Site Photographs	**Ref:** GWPR3898	

Photograph 9: View of the covered area to the north of the polytunnels.



Photograph 10: Inside the covered area to the north of the polytunnels.

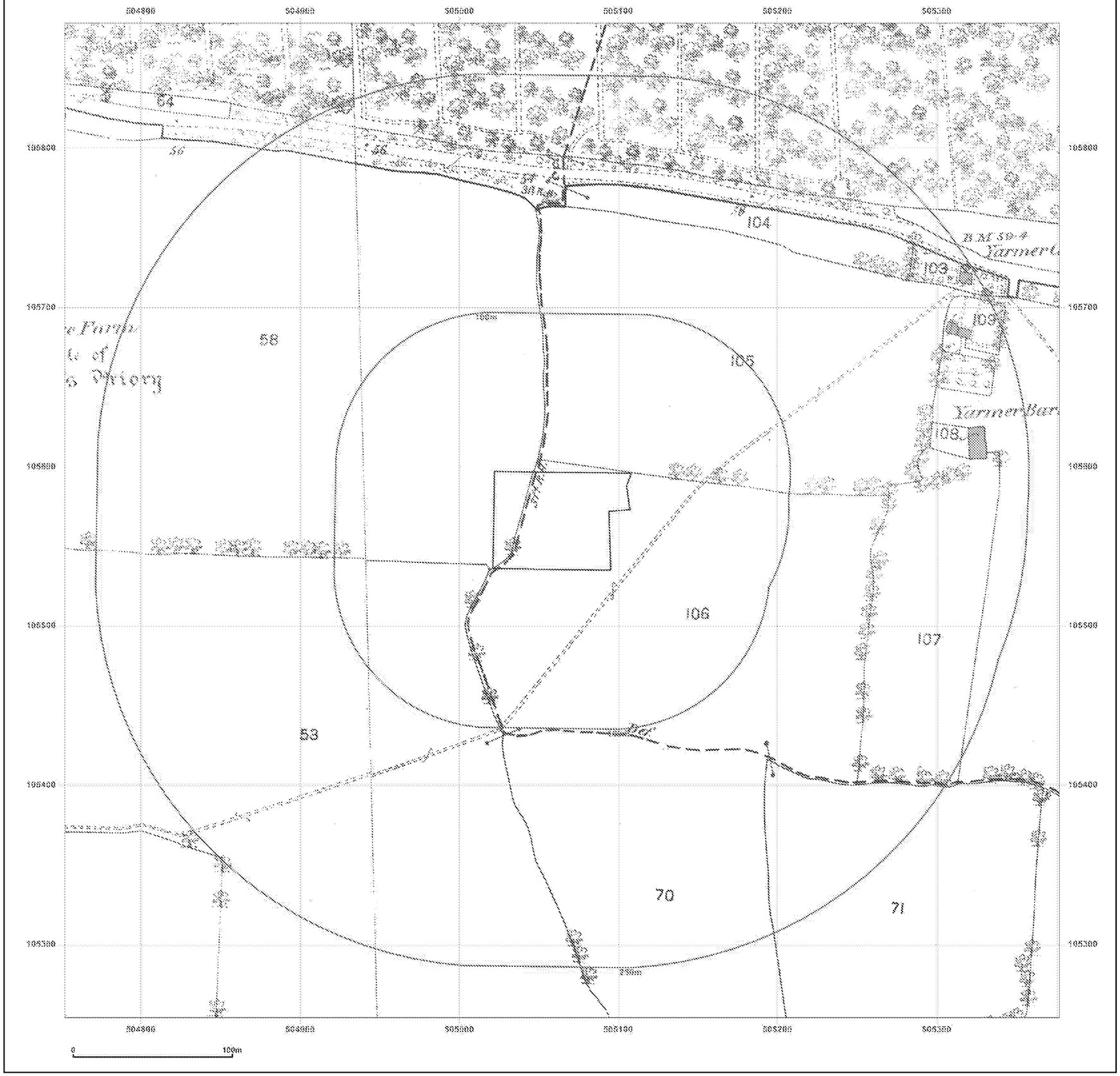


Project: The Vinery, Arundel Road, Poling, West Sussex BN18 9PY		**Plate 5:**
Client: Tributes Limited c/o Paul Airey Planning Associates	**Date:** December 2020	
Appendix B: Site Photographs	**Ref:** GWPR3898	

APPENDIX C
Historical Maps

ARUN DISTRICT COUNCIL A/97/21/DOC

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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

Map date: **1876**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1876
Revised 1876
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1876
Edition N/A
Copyright N/A
Levelled N/A

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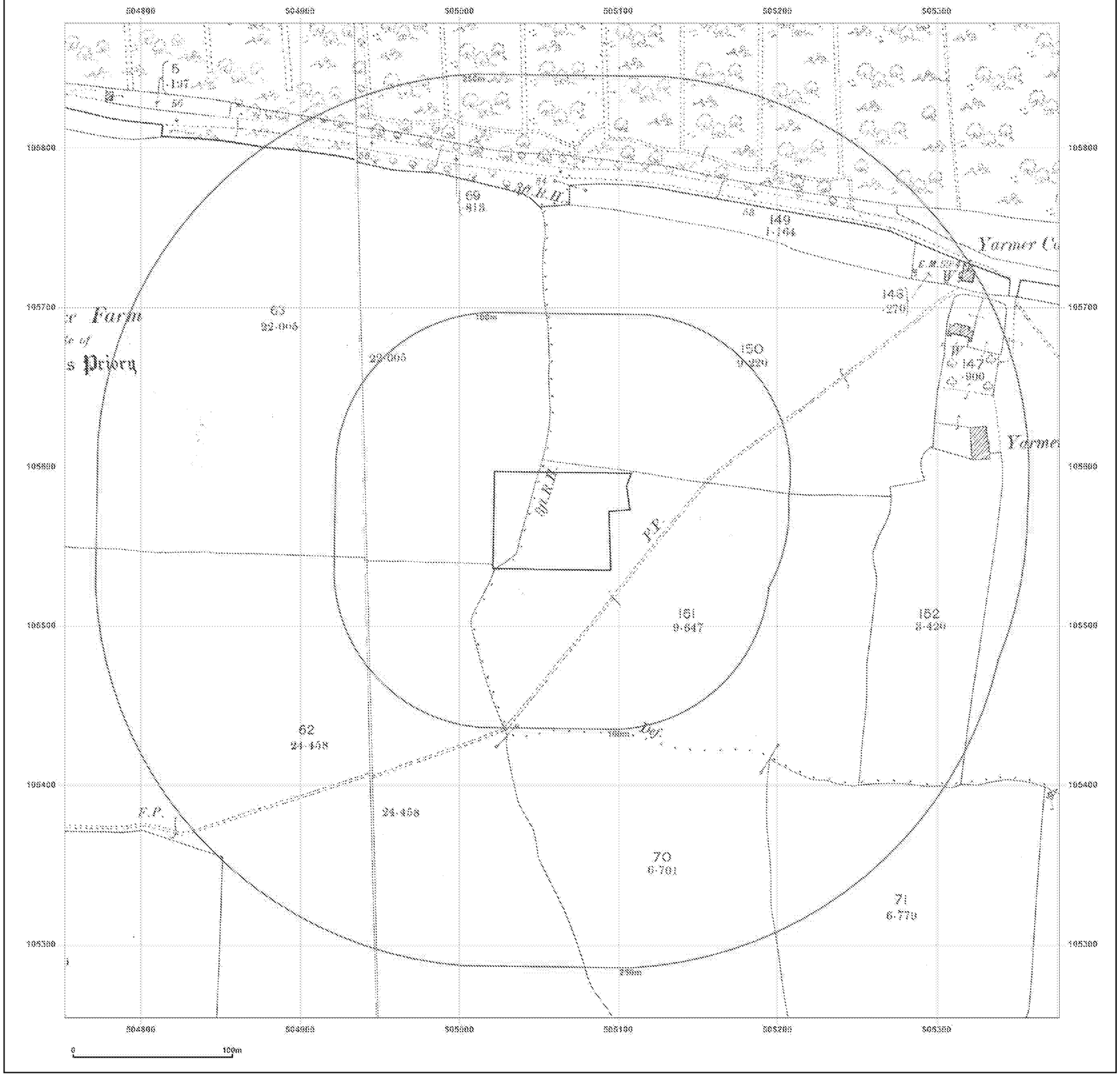
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Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

Map date: **1897**

Scale: 1:2,500

Printed at: 1:2,500

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Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
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Surveyed 1897
Revised 1897
Edition N/A
Copyright N/A
Levelled N/A

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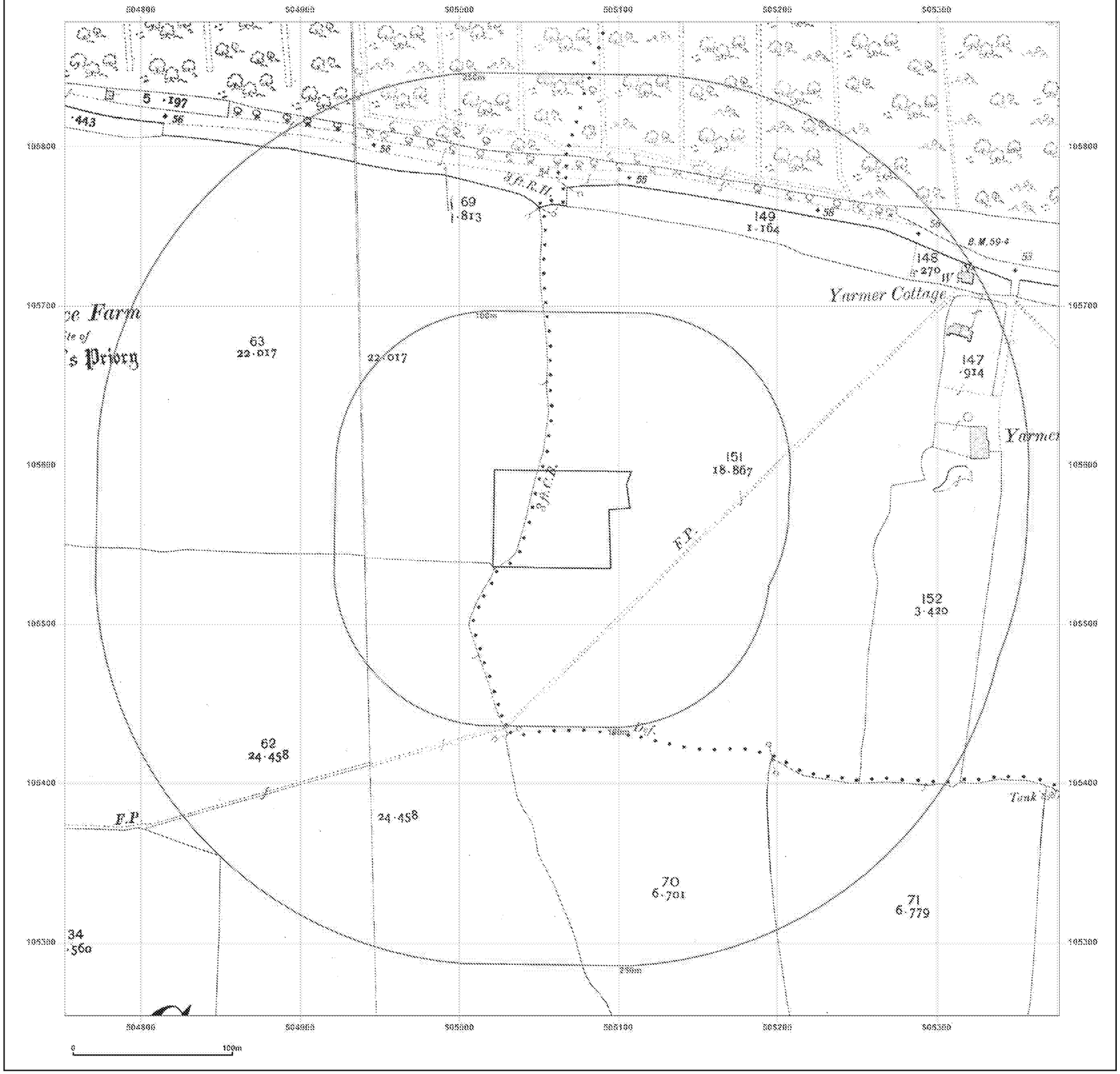
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Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
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Grid Ref: 505065, 105566

Map Name: County Series
Map date: 1912
Scale: 1:2,500
Printed at: 1:2,500

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Surveyed 1912
Revised 1912
Edition N/A
Copyright N/A
Levelled N/A

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Revised 1912
Edition N/A
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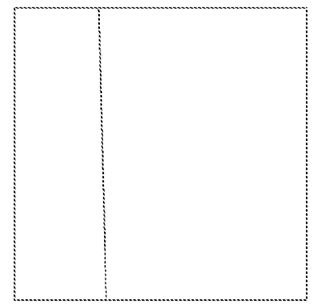
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Surveyed 1937
Revised 1937
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Copyright N/A
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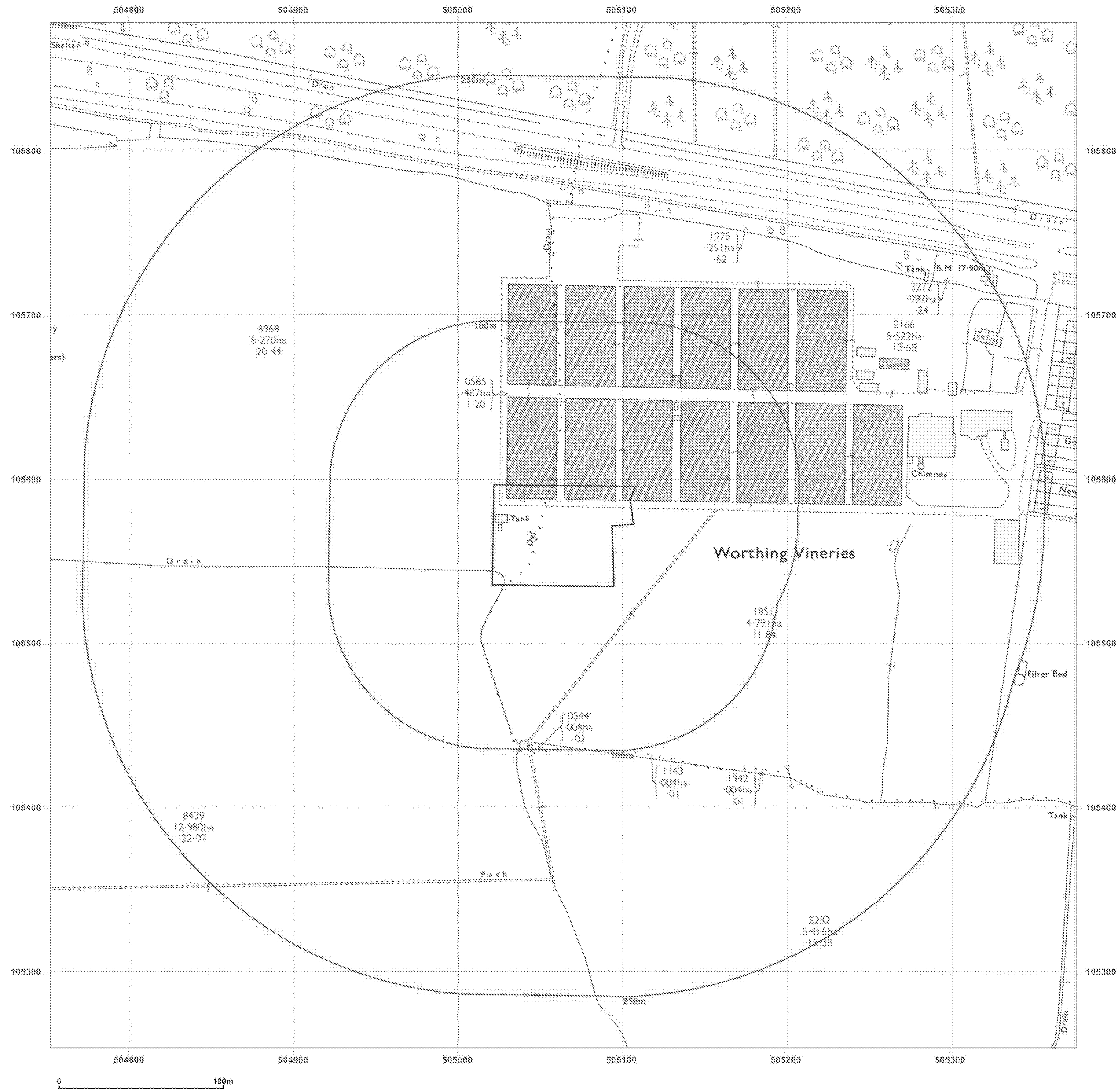
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Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid

Map date: **1971**

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Surveyed 1971
Revised 1971
Edition N/A
Copyright 1972
Levelled 1966

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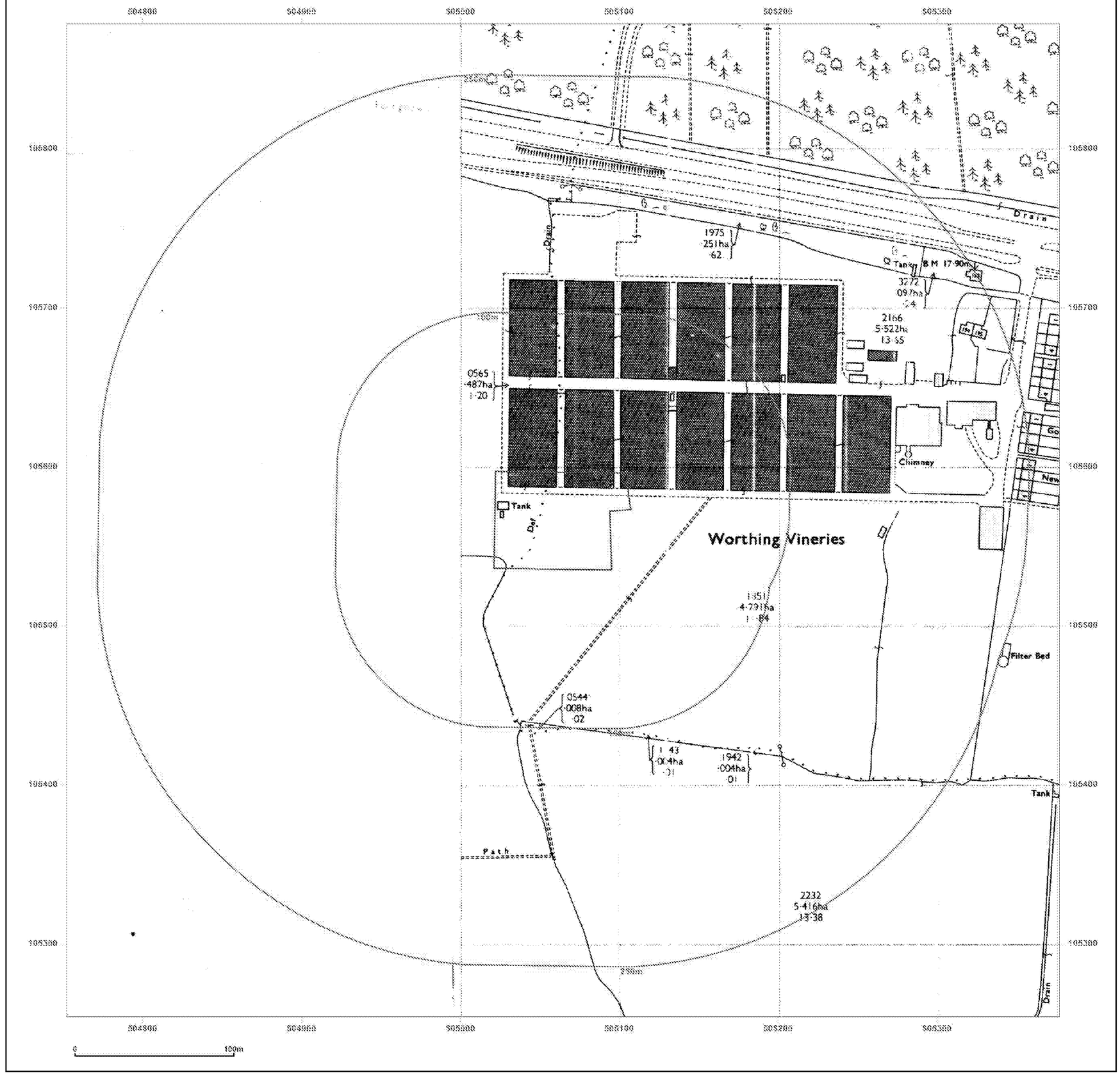
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THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

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Map Name: National Grid

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Printed at: 1:2,500

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Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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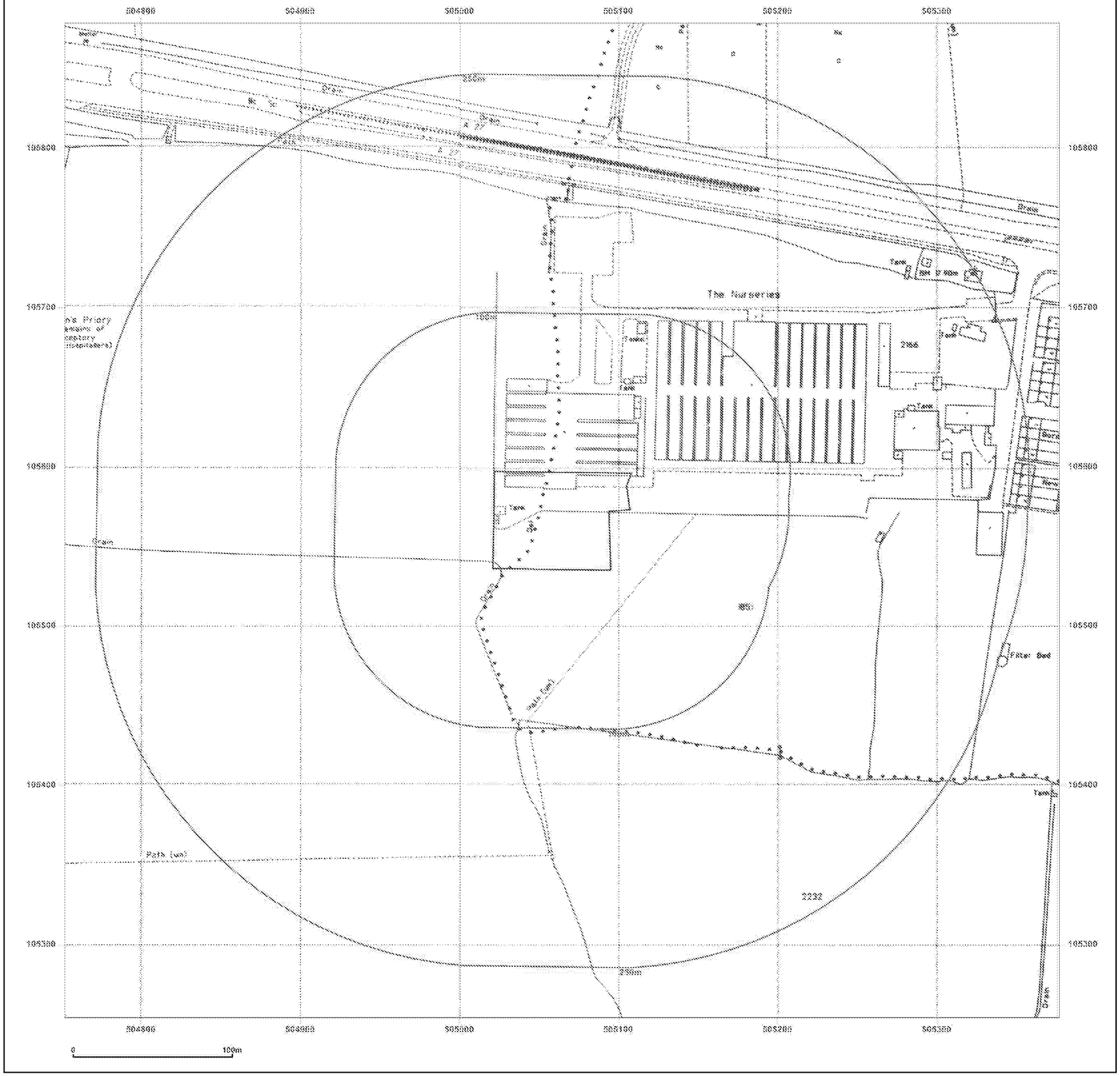
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POLING, BN18 9PY

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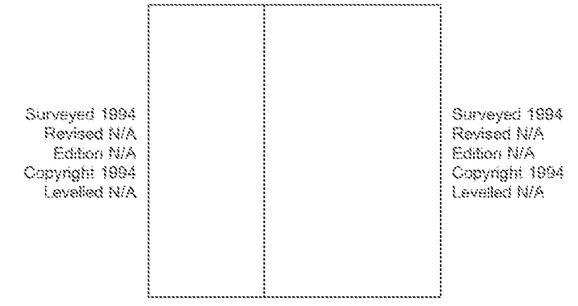
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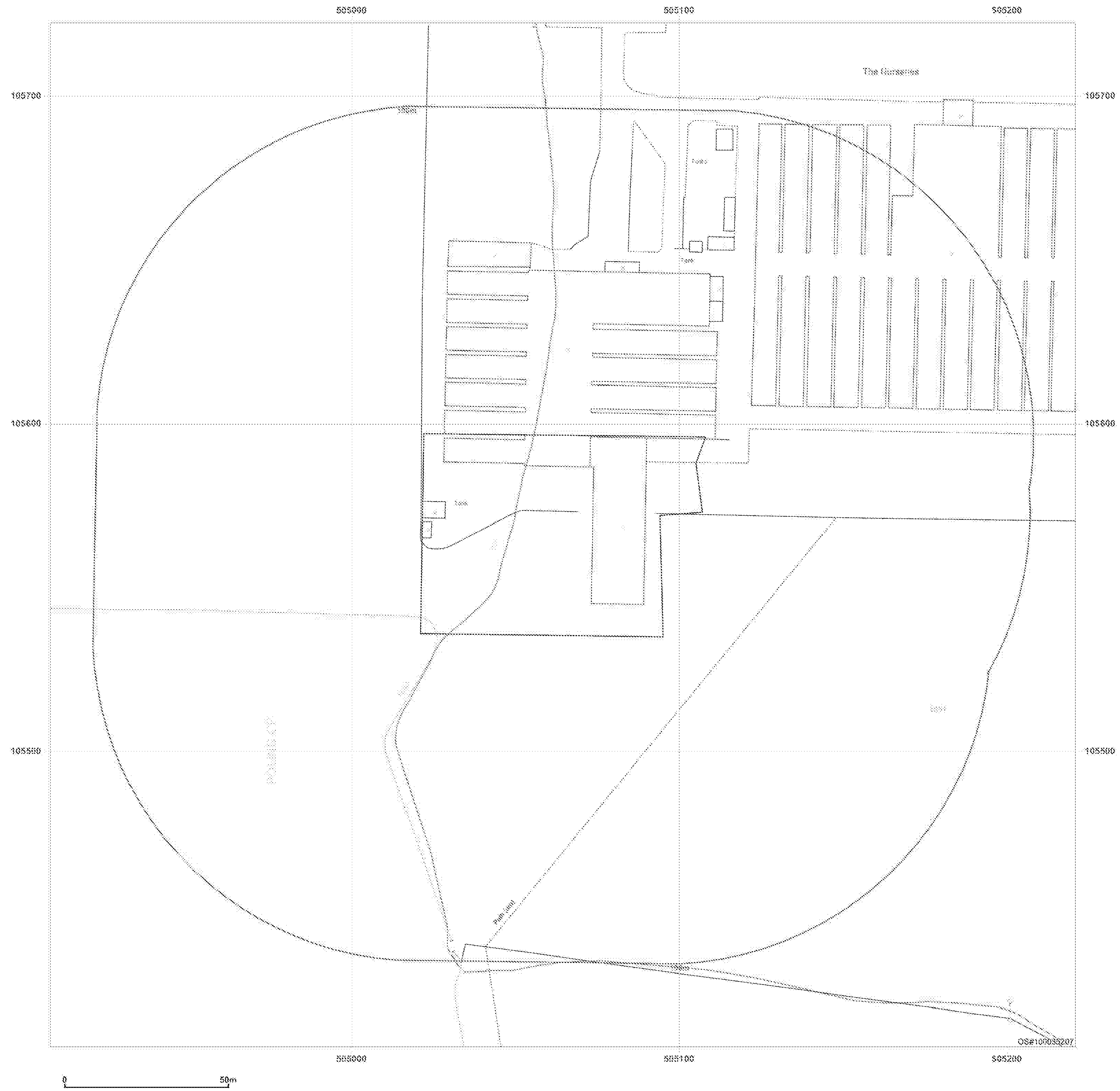
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Site Details:

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POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

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Printed at: 1:1,250

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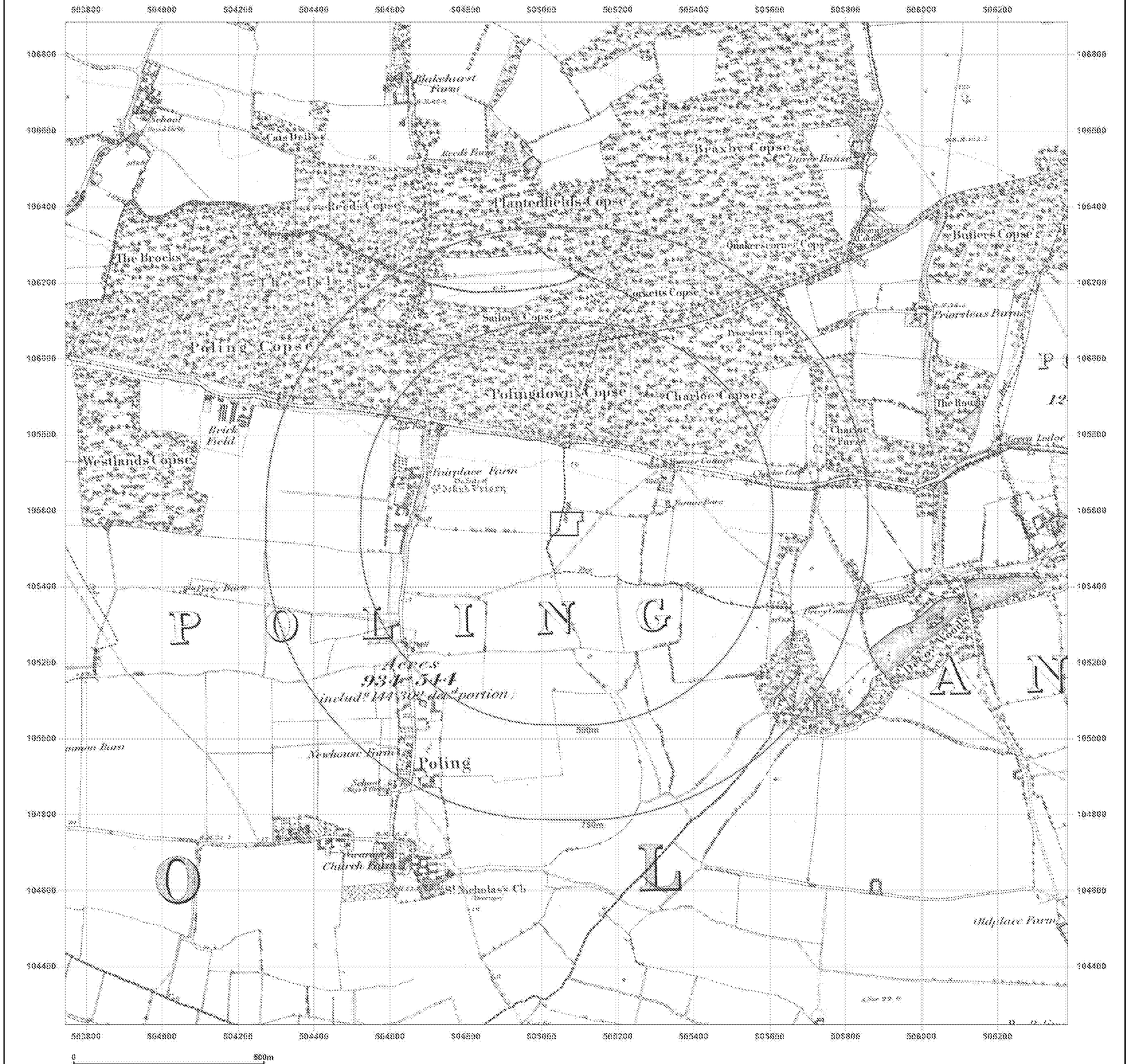
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Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

Map date: **1876**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1876
Revised 1876
Edition N/A
Copyright N/A
Levelled N/A

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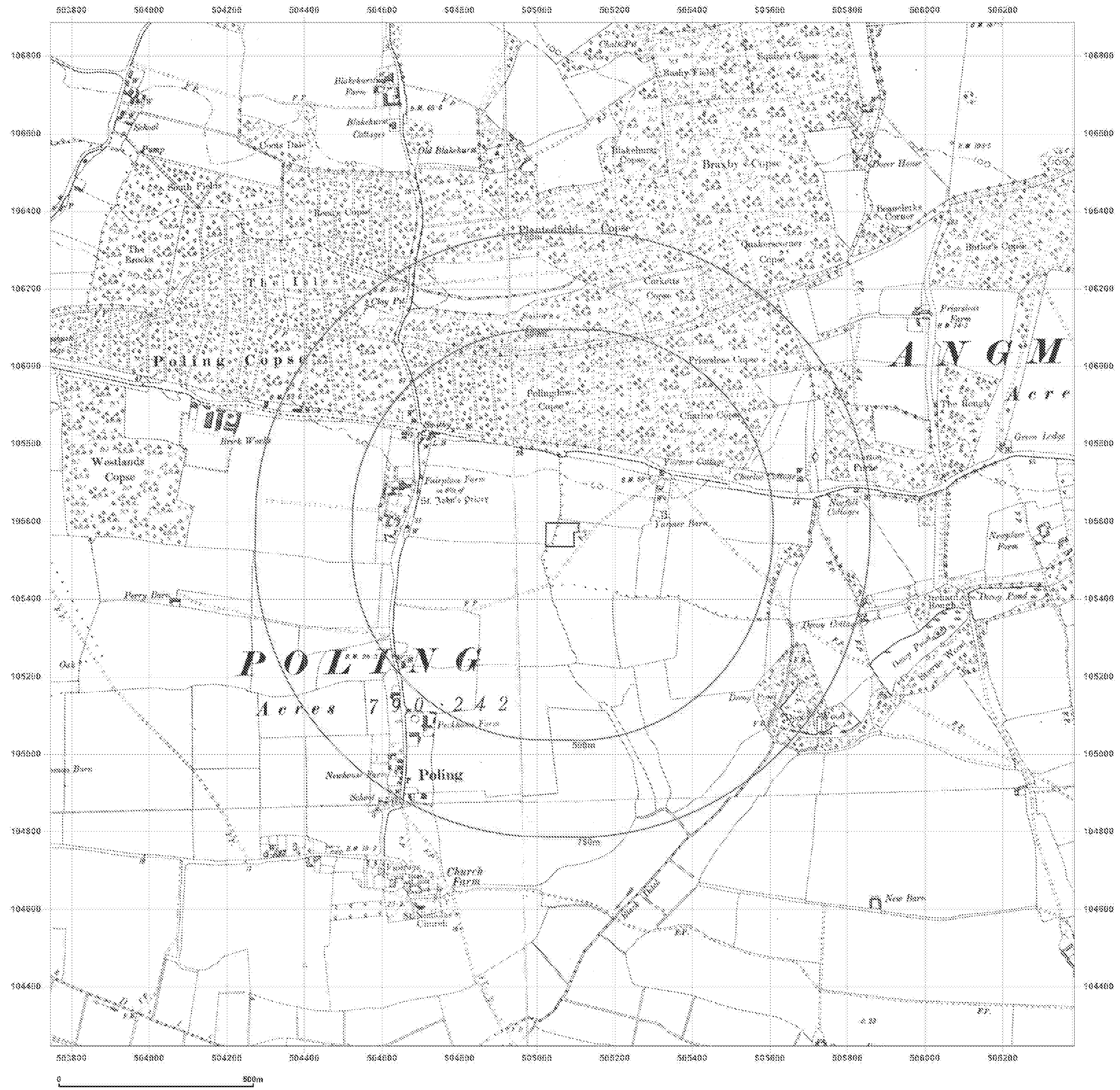
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Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

Map date: **1896-1899**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1896
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1899
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1876
Revised 1896
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Levelled N/A

Surveyed 1876
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Edition N/A
Copyright N/A
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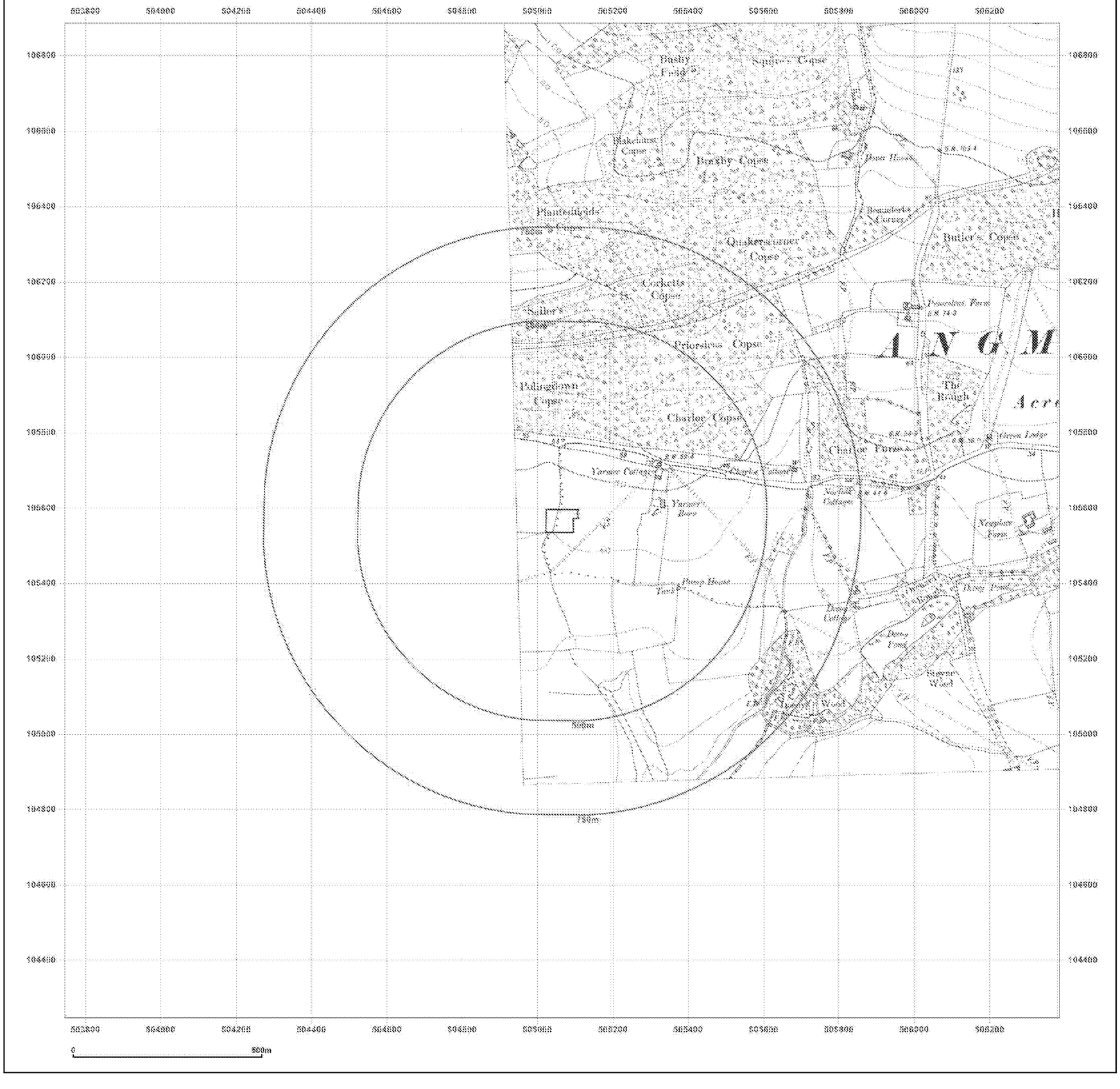
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ARUN DISTRICT COUNCIL A97/21/DOC



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THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
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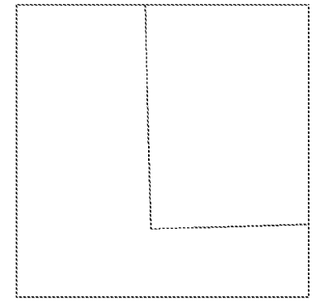
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Map date: **1909**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1875
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Powered by OS

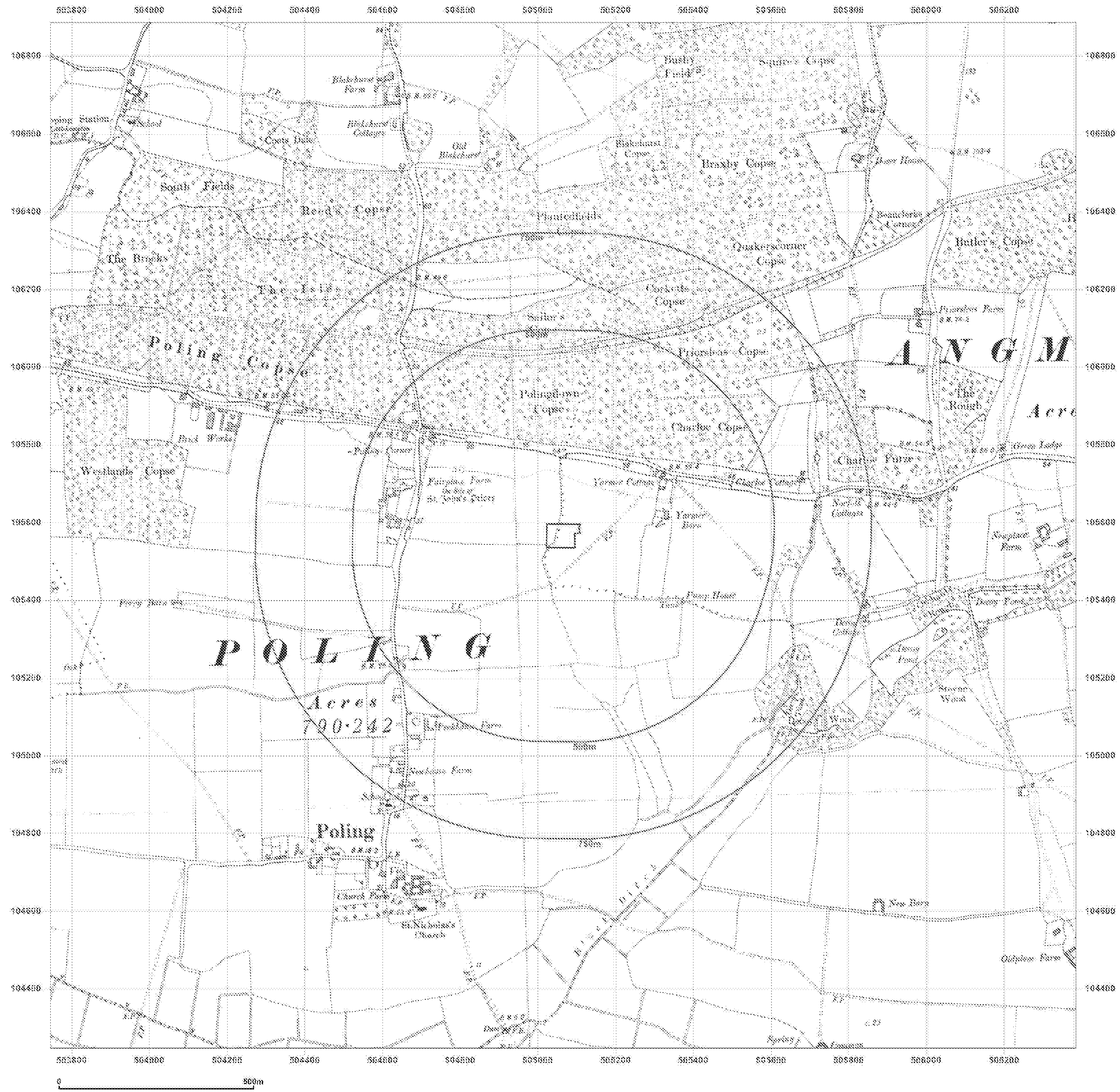
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Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

Map date: **1909-1910**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1875
Revised 1910
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1909
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1910
Edition N/A
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Levelled N/A

Surveyed 1875
Revised 1910
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Copyright N/A
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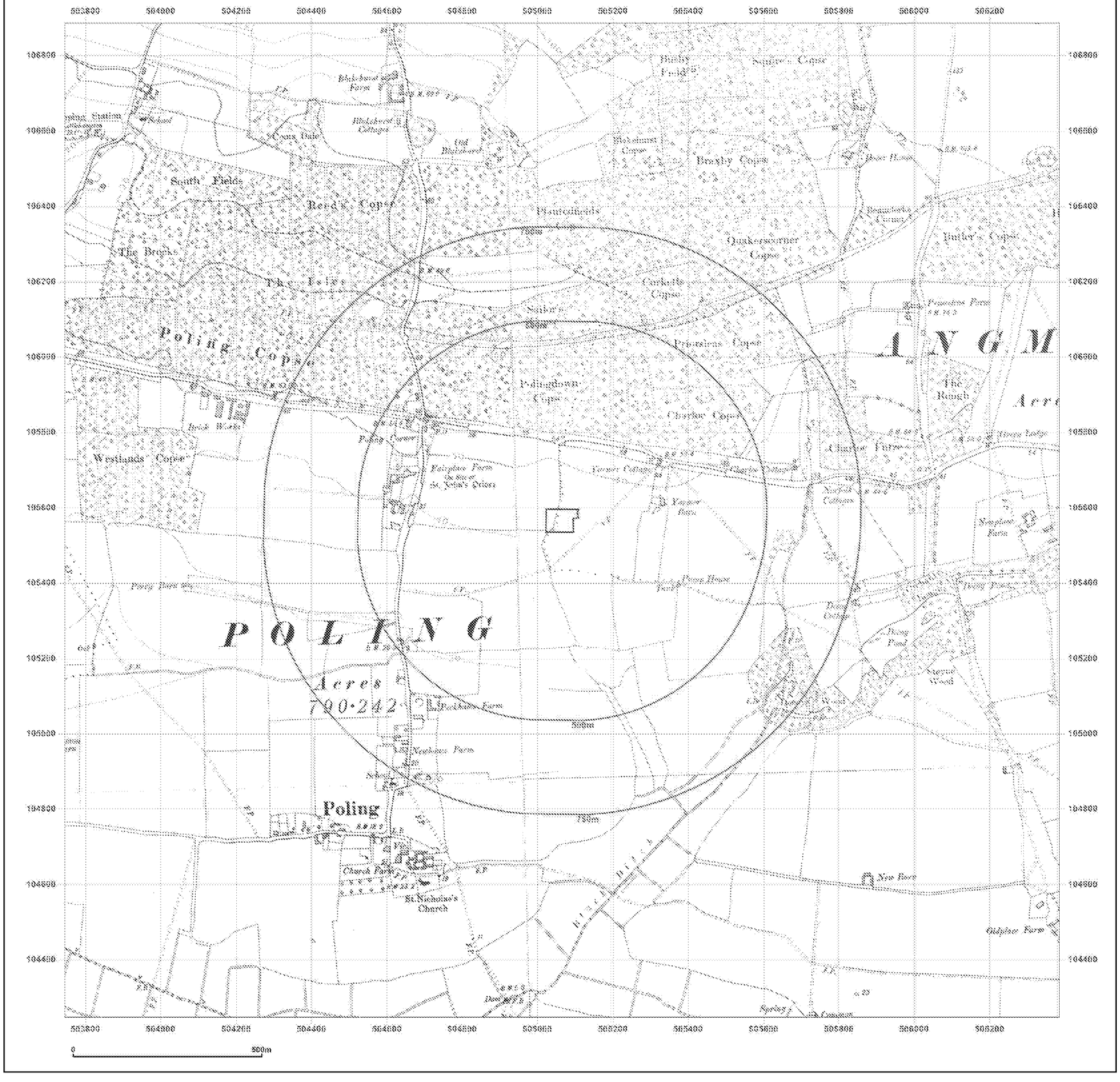
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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

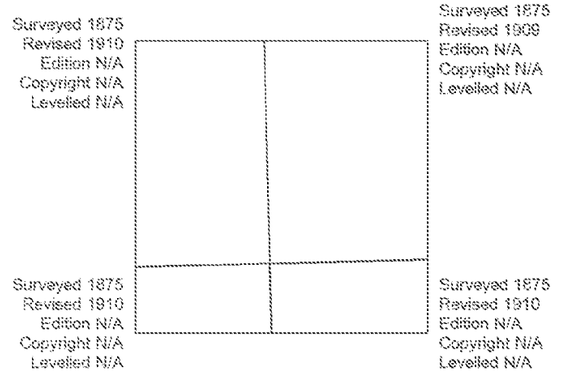
Map Name: County Series

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Scale: 1:10,560

Printed at: 1:10,560

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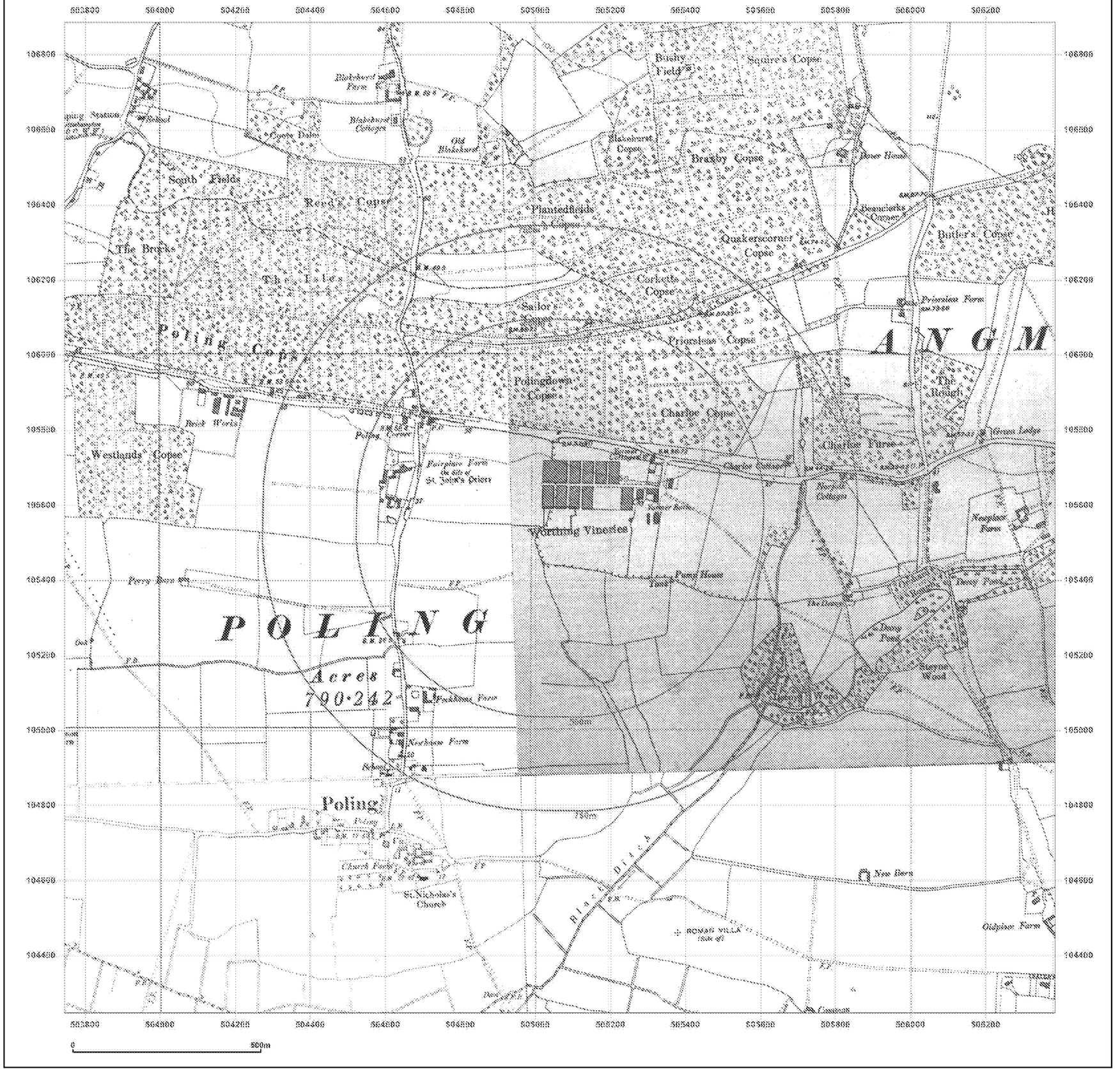
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ARUN DISTRICT COUNCIL A/97/21/DOC



Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

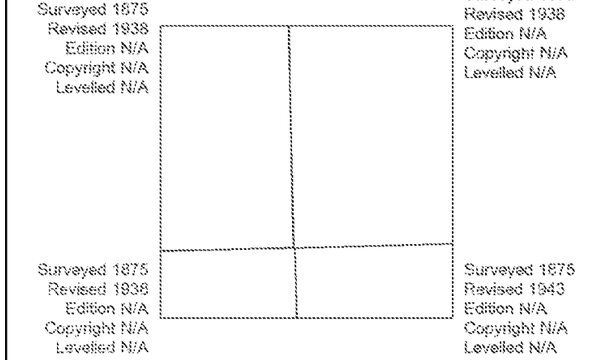
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Map date: **1938-1943**

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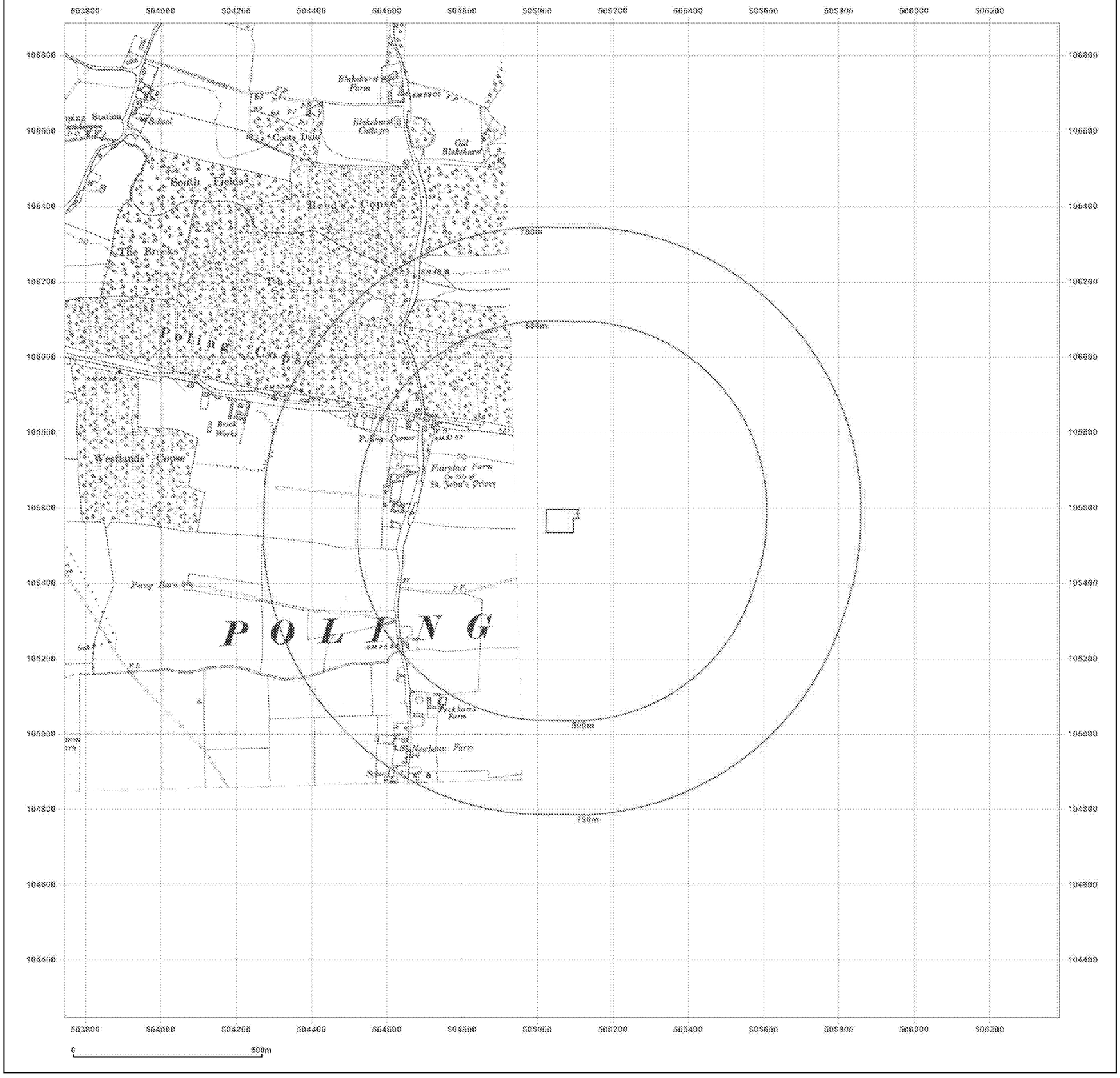
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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: County Series

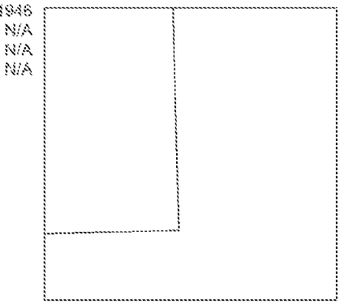
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Surveyed 1875
Revised 1946
Edition N/A
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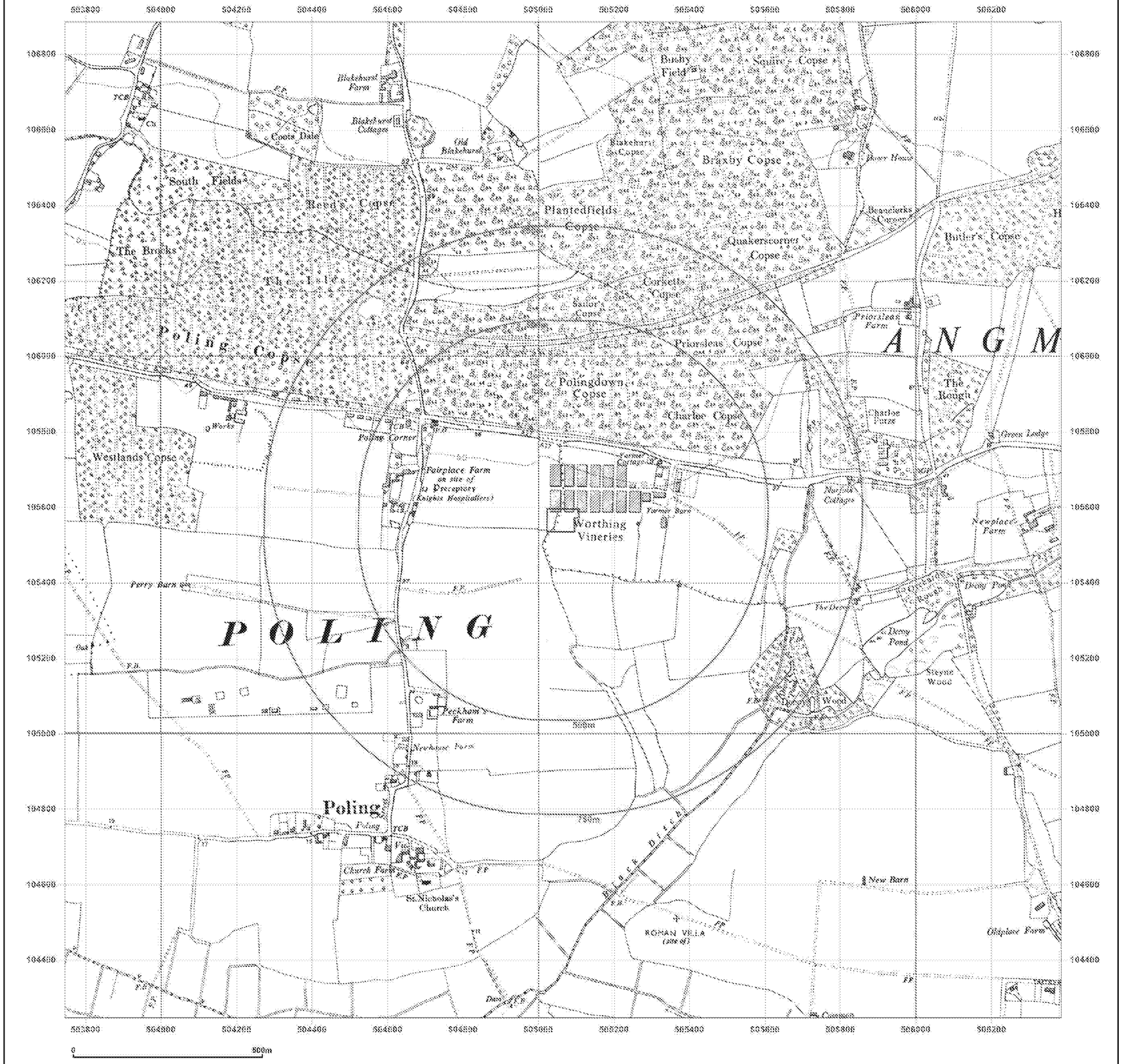
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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: Provisional

Map date: **1957**

Scale: 1:10,560

Printed at: 1:10,560

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Revised 1957
Edition N/A
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Surveyed 1957
Revised 1957
Edition N/A
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Surveyed 1875
Revised 1957
Edition N/A
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Edition N/A
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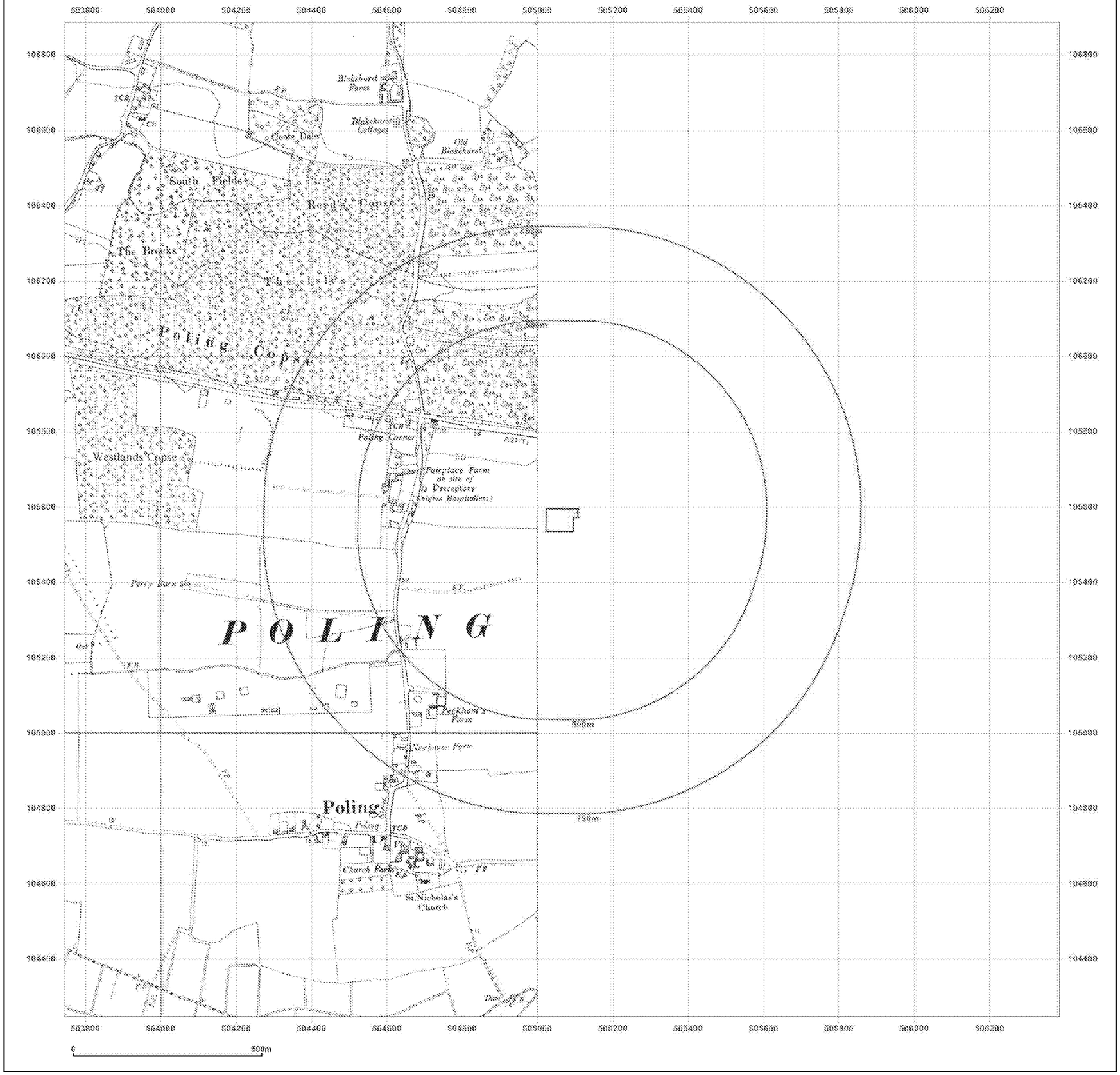
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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: Provisional

Map date: **1957**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1957
Revised 1957
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1875
Revised 1957
Edition N/A
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Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid

Map date: **1974-1976**

Scale: 1:10,000

Printed at: 1:10,000

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Surveyed 1972
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1972
Revised 1976
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1974
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1973
Revised 1974
Edition N/A
Copyright N/A
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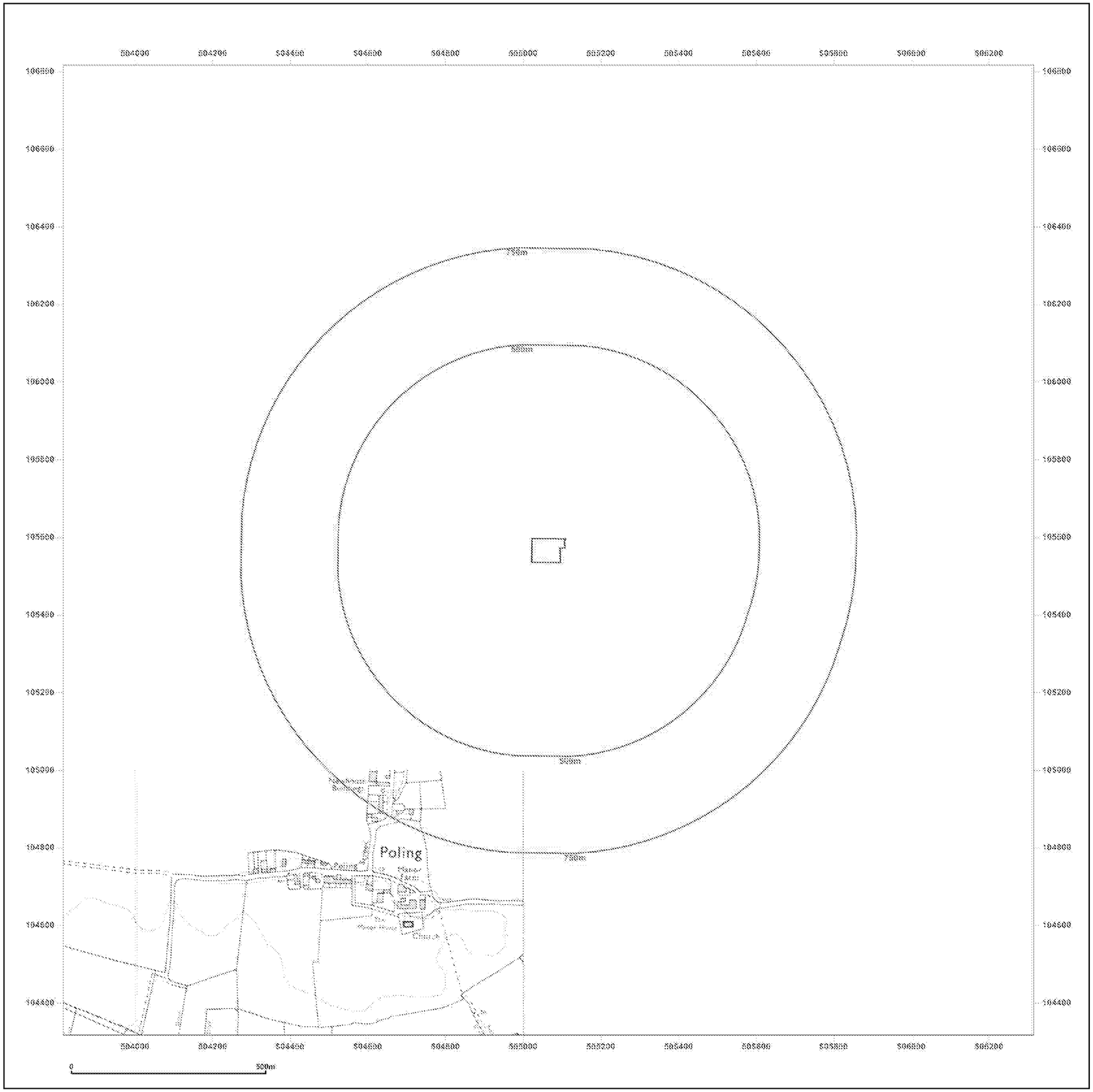
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Production date: 14 October 2020

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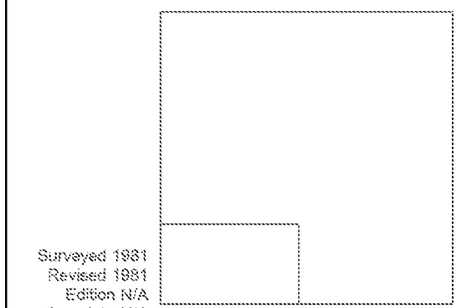
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THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid
Map date: **1981**
Scale: 1:10,000
Printed at: 1:10,000

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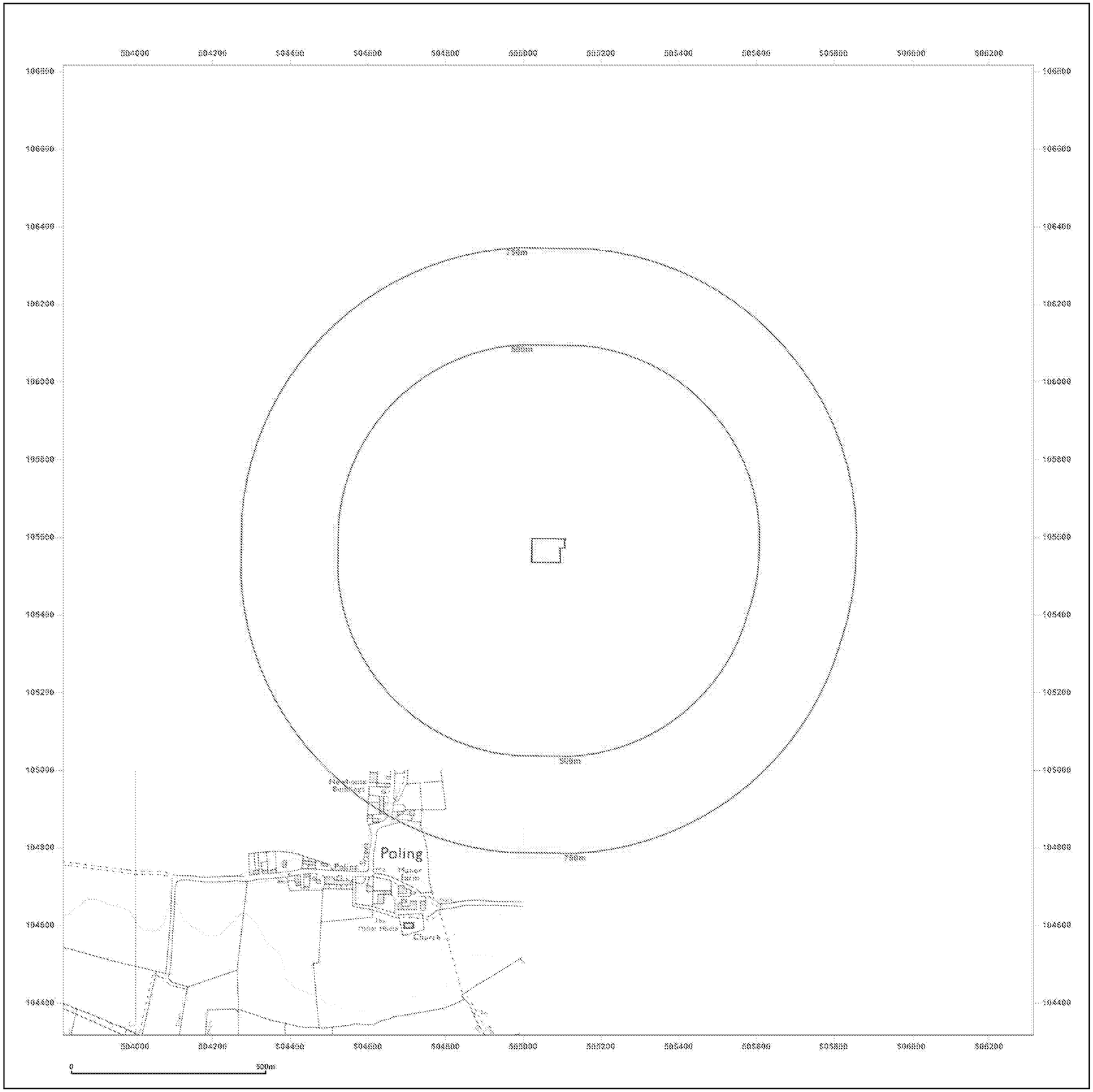
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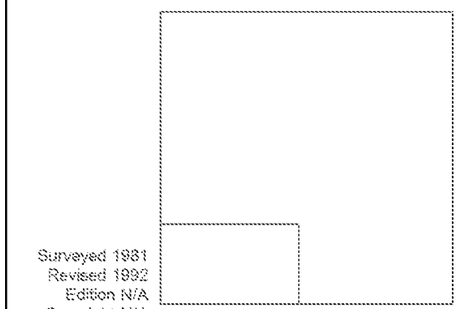
Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid
Map date: 1992
Scale: 1:10,000
Printed at: 1:10,000

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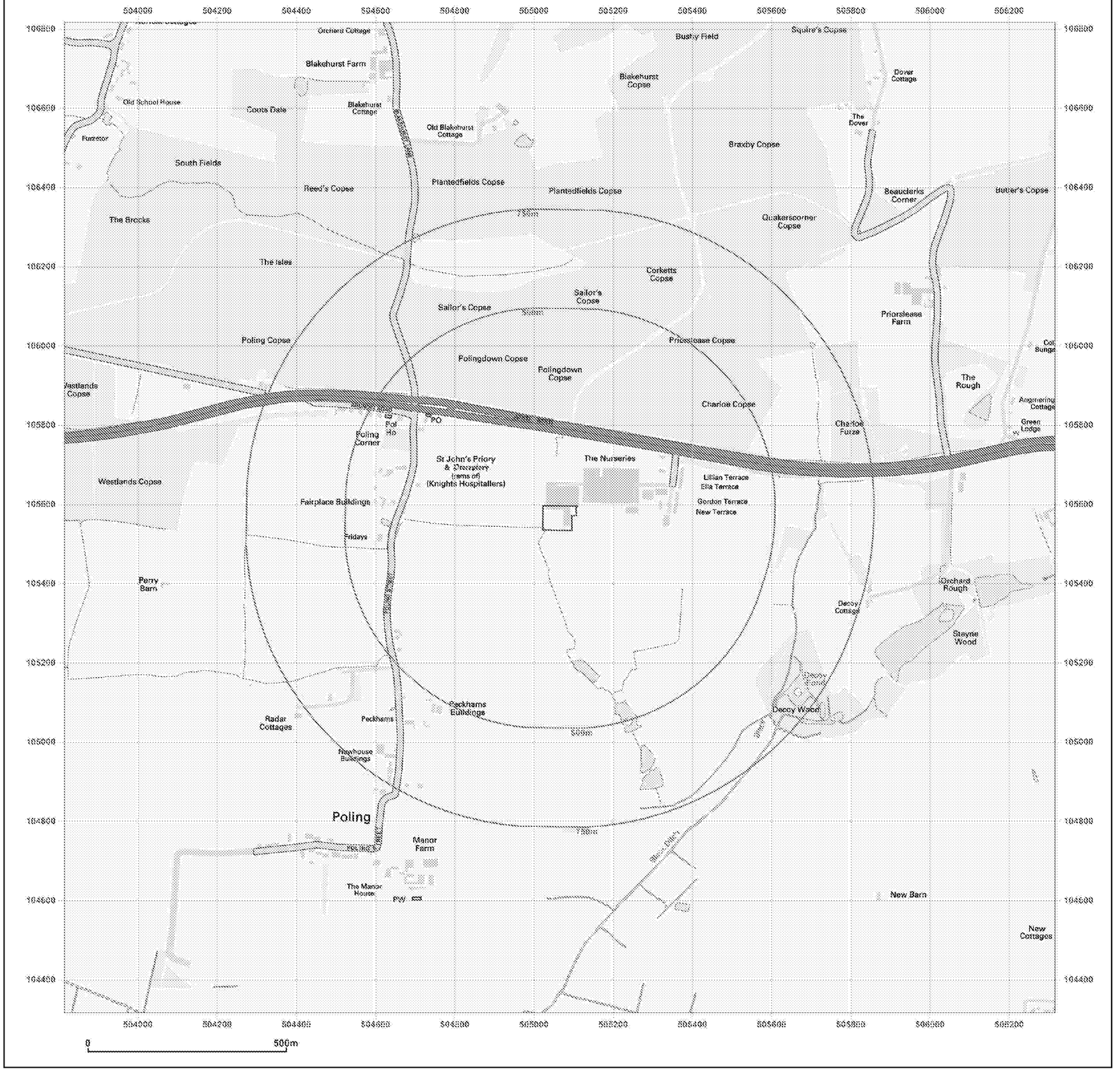
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Production date: 14 October 2020

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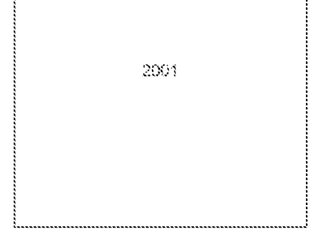
Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid
Map date: 2001
Scale: 1:10,000
Printed at: 1:10,000

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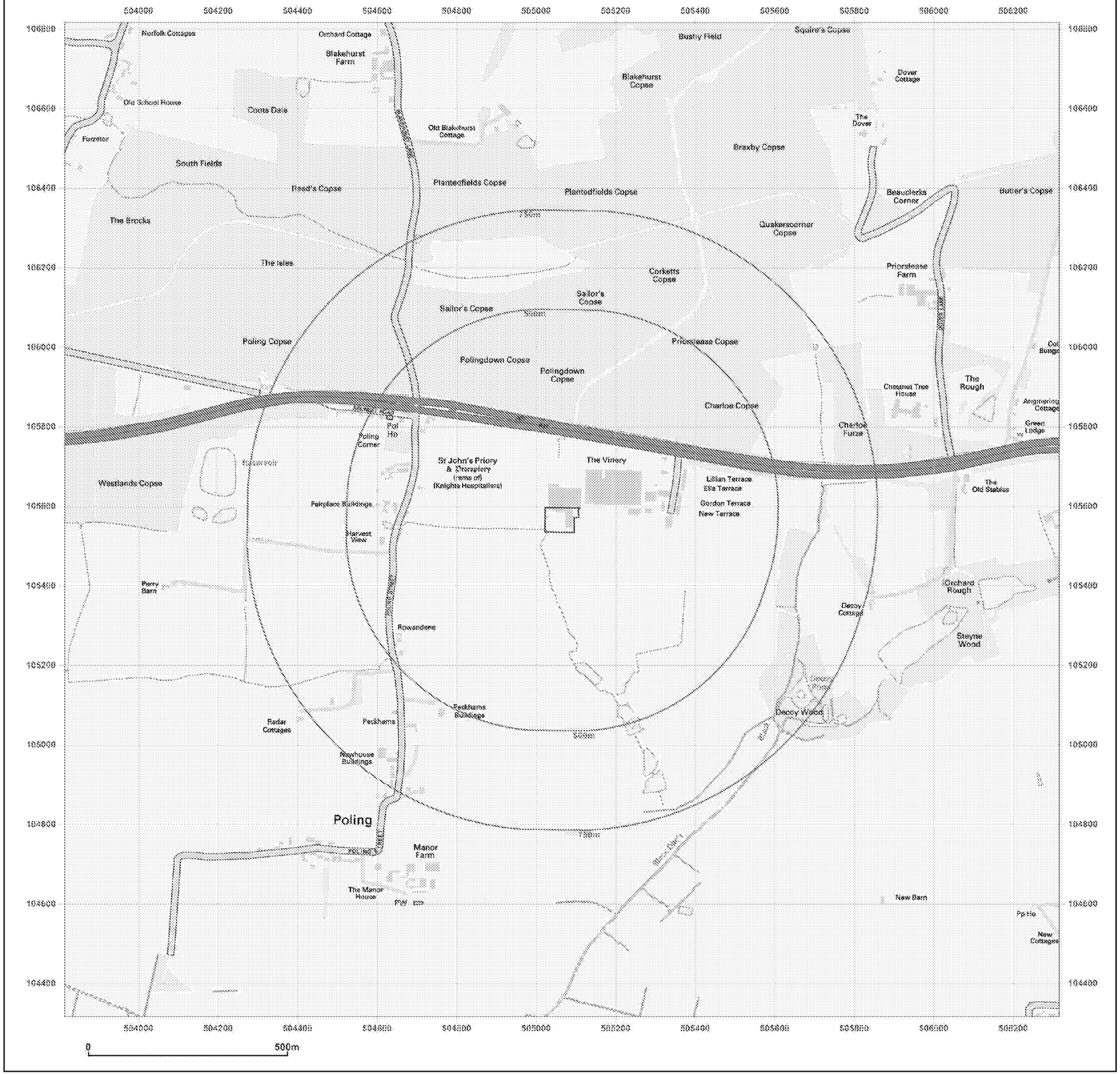
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Groundsure INSIGHTS

Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

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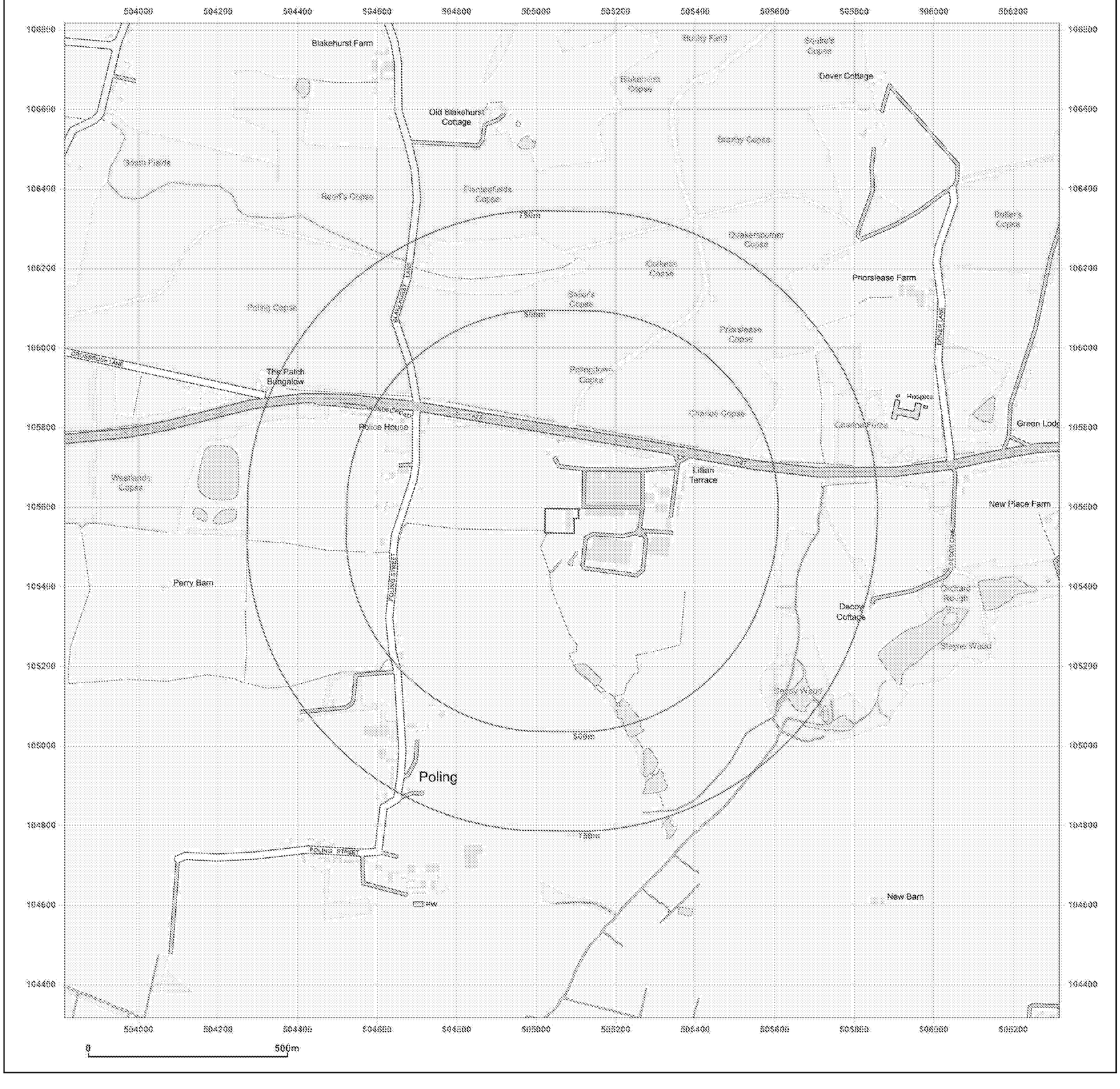
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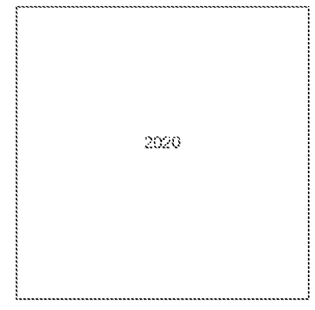
Site Details:

THE VINERY, ARUNDEL ROAD,
POLING, BN18 9PY

Client Ref: GWPR3898
Report Ref: HMD-445-7159384
Grid Ref: 505065, 105566

Map Name: National Grid
Map date: **2020**
Scale: 1:10,000
Printed at: 1:10,000

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APPENDIX D
GroundSure EnviroInsight and GeoInsight Datasheets

ARUN DISTRICT COUNCIL A/97/21/DOC

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

THE VINERY, ARUNDEL ROAD, POLING, BN18 9PY

Order Details

Date: 14/10/2020

Your ref: GWPR3898

Our Ref: HMD-445-7159385

Client: Ground and Water Limited

Site Details

Location: 505059 105566

Area: 0.47 ha

Authority: Arun District Council



Summary of findings p. 2

OS MasterMap site plan p.13

Aerial image p. 8

Contact us with any questions at:
info@groundsure.com
[redacted]

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	Historical industrial land uses	2	0	0	4	-
15	1.2	Historical tanks	1	0	7	2	-
16	1.3	Historical energy features	0	0	0	1	-
16	1.4	Historical petrol stations	0	0	0	0	-
16	1.5	Historical garages	0	0	0	0	-
17	1.6	Historical military land	0	0	0	0	-

Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
18	2.1	Historical industrial land uses	2	0	0	5	-
19	2.2	Historical tanks	2	0	8	3	-
20	2.3	Historical energy features	0	0	0	2	-
20	2.4	Historical petrol stations	0	0	0	0	-
20	2.5	Historical garages	0	0	0	0	-

Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
21	3.1	Active or recent landfill	0	0	0	0	-
21	3.2	Historical landfill (BGS records)	0	0	0	0	-
22	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
22	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
22	3.5	Historical waste sites	0	0	1	0	-
23	3.6	Licensed waste sites	0	0	1	0	-
23	3.7	Waste exemptions	0	0	7	2	-

Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
25	4.1	Recent industrial land uses	1	0	18	-	-
27	4.2	Current or recent petrol stations	0	0	0	0	-
27	4.3	Electricity cables	0	0	0	0	-
27	4.4	Gas pipelines	0	0	0	0	-
27	4.5	Sites determined as Contaminated Land	0	0	0	0	-

ARUN DISTRICT COUNCIL A/97/21/DOC

27	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
28	4.7	Regulated explosive sites	0	0	0	0	-
28	4.8	Hazardous substance storage/usage	0	0	0	0	-
28	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
28	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
28	4.11	Licensed pollutant release (Part A(2)/B)	0	0	0	0	-
29	4.12	Radioactive Substance Authorisations	0	0	0	0	-
29	**4.13**	**Licensed Discharges to controlled waters**	0	0	0	1	-
29	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
29	4.15	Pollutant release to public sewer	0	0	0	0	-
30	4.16	List 1 Dangerous Substances	0	0	0	0	-
30	4.17	List 2 Dangerous Substances	0	0	0	0	-
30	4.18	Pollution Incidents (EA/NRW)	0	0	0	0	-
30	4.19	Pollution Inventory substances	0	0	0	0	-
30	4.20	Pollution Inventory waste transfers	0	0	0	0	-
31	4.21	Pollution Inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
32	**5.1**	**Superficial aquifer**	Identified (within 500m)				
34	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
36	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
37	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
37	5.5	Groundwater vulnerability- local information	None (within 0m)				
38	**5.6**	**Groundwater abstractions**	2	0	2	0	12
42	**5.7**	**Surface water abstractions**	0	0	0	0	8
44	**5.8**	**Potable abstractions**	0	0	0	0	3
45	5.9	Source Protection Zones	0	0	0	0	-
45	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
46	**6.1**	**Water Network (OS MasterMap)**	1	0	8	-	-

ARUN DISTRICT COUNCIL A/97/21/DOC

47	6.2	Surface water features	1	1	7	-	-
48	6.3	WFD Surface water body catchments	1	-	-	-	-
48	6.4	WFD Surface water bodies	0	0	0	-	-
48	6.5	WFD Groundwater bodies	1	-	-	-	-

Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
50	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
50	7.2	Historical Flood Events	0	0	0	-	-
50	7.3	Flood Defences	0	0	0	-	-
50	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
51	7.5	Flood Storage Areas	0	0	0	-	-
52	7.6	Flood Zone 2	None (within 50m)				
52	7.7	Flood Zone 3	None (within 50m)				

Page	Section	Surface water flooding	
53	8.1	Surface water flooding	1 in 100 year, 0.3m - 1.0m (within 50m)

Page	Section	Groundwater flooding	
55	9.1	Groundwater flooding	Moderate-High (within 50m)

Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
56	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
57	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
57	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
57	10.4	Special Protection Areas (SPA)	0	0	0	0	0
57	10.5	National Nature Reserves (NNR)	0	0	0	0	0
58	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
58	10.7	Designated Ancient Woodland	0	0	1	1	12
59	10.8	Biosphere Reserves	0	0	0	0	0
59	10.9	Forest Parks	0	0	0	0	0
59	10.10	Marine Conservation Zones	0	0	0	0	0
59	10.11	Green Belt	0	0	0	0	0
59	10.12	Proposed Ramsar sites	0	0	0	0	0

ARUN DISTRICT COUNCIL A/97/21/DOC

60	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
60	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
60	10.15	Nitrate Sensitive Areas	0	0	0	0	0
60	**10.16**	**Nitrate Vulnerable Zones**	1	0	0	1	2
62	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
63	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
64	11.1	World Heritage Sites	0	0	0	-	-
65	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
65	**11.3**	**National Parks**	0	0	1	-	-
65	11.4	Listed Buildings	0	0	0	-	-
66	11.5	Conservation Areas	0	0	0	-	-
66	11.6	Scheduled Ancient Monuments	0	0	0	-	-
66	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
67	**12.1**	**Agricultural Land Classification**	Non Agricultural (within 250m)				
68	12.2	Open Access Land	0	0	0	-	-
68	**12.3**	**Tree Felling Licences**	0	0	1	-	-
68	12.4	Environmental Stewardship Schemes	0	0	0	-	-
69	**12.5**	**Countryside Stewardship Schemes**	1	0	1	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
70	**13.1**	**Priority Habitat Inventory**	0	0	4	-	-
71	13.2	Habitat Networks	0	0	0	-	-
71	13.3	Open Mosaic Habitat	0	0	0	-	-
71	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
72	**14.1**	**10k Availability**	Identified (within 500m)				
73	14.2	Artificial and made ground (10k)	0	0	0	0	-
74	**14.3**	**Superficial geology (10k)**	1	1	1	1	-

ARUN DISTRICT COUNCIL A/97/21/DOC

75	14.4	Landslip (10k)	0	0	0	0	-
76	14.5	Bedrock geology (10k)	1	1	2	0	-
77	14.6	Bedrock faults and other linear features (10k)	0	0	0	2	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
78	15.1	50k Availability	Identified (within 500m)				
79	15.2	Artificial and made ground (50k)	0	0	0	0	-
79	15.3	Artificial ground permeability (50k)	0	0	-	-	-
80	15.4	Superficial geology (50k)	1	0	1	1	-
81	15.5	Superficial permeability (50k)	Identified (within 50m)				
81	15.6	Landslip (50k)	0	0	0	0	-
81	15.7	Landslip permeability (50k)	None (within 50m)				
82	15.8	Bedrock geology (50k)	1	0	1	0	-
83	15.9	Bedrock permeability (50k)	Identified (within 50m)				
83	15.10	Bedrock faults and other linear features (50k)	0	0	0	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
84	16.1	BGS Boreholes	1	0	1	-	-
Page	Section	Natural ground subsidence					
85	17.1	Shrink swell clays	Moderate (within 50m)				
86	17.2	Running sands	Low (within 50m)				
88	17.3	Compressible deposits	Negligible (within 50m)				
89	17.4	Collapsible deposits	Low (within 50m)				
90	17.5	Landslides	Very low (within 50m)				
92	17.6	Ground dissolution of soluble rocks	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
94	18.1	Natural cavities	0	0	0	0	-
95	18.2	BritPits	0	0	0	0	-
95	18.3	Surface ground workings	0	0	0	-	-
95	18.4	Underground workings	0	0	0	0	0
95	18.5	Historical Mineral Planning Areas	0	0	0	1	-

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96	18.6	Non-coal mining	1	1	0	1	2
96	18.7	Mining cavities	0	0	0	0	0
97	18.8	JPB mining areas	None (within 0m)				
97	18.9	Coal mining	None (within 0m)				
97	18.10	Brine areas	None (within 0m)				
97	18.11	Gypsum areas	None (within 0m)				
97	18.12	Tin mining	None (within 0m)				
98	18.13	Clay mining	None (within 0m)				

Page	Section	Radon
99	19.1	Radon	Between 1% and 3% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
100	20.1	BGS Estimated Background Soil Chemistry	1	5	-	-	-
100	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
101	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
102	21.1	Underground railways (London)	0	0	0	-	-
102	21.2	Underground railways (Non-London)	0	0	0	-	-
102	21.3	Railway tunnels	0	0	0	-	-
102	21.4	Historical railway and tunnel features	0	0	0	-	-
102	21.5	Royal Mail tunnels	0	0	0	-	-
103	21.6	Historical railways	0	0	0	-	-
103	21.7	Railways	0	0	0	-	-
103	21.8	Crossrail 1	0	0	0	0	-
103	21.9	Crossrail 2	0	0	0	0	-
103	21.10	HS2	0	0	0	0	-

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Recent aerial photograph



Capture Date: 28/06/2018

Site Area: 0.47ha

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Recent site history - 2015 aerial photograph



Capture Date: 30/06/2015

Site Area: 0.47ha

ARUN DISTRICT COUNCIL A/97/21/DOC

Recent site history - 2012 aerial photograph



Aerial photography supplied by GeoInformation Group, © GeoInformation Group 2020, All rights reserved

Capture Date: 13/09/2012

Site Area: 0.47ha

ARUN DISTRICT COUNCIL A/97/21/DOC

Recent site history - 2009 aerial photograph



Capture Date: 27/09/2009

Site Area: 0.47ha

ARUN DISTRICT COUNCIL A/97/21/DOC

Recent site history - 1999 aerial photograph



Aerial photography supplied by GeoInformation Ltd. © GeoInformation Group 2020. All rights reserved.

Capture Date: 06/09/1999

Site Area: 0.47ha

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OS MasterMap site plan



Site Area: 0.47ha

ARUN DISTRICT COUNCIL A/97/21/DOC

1 Past land use



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

1.1 Historical industrial land uses

Records within 500m	6

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Vineries	1957	2137983

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ID	Location	Land use	Dates present	Group ID
2	**On site**	**Nurseries**	**1976**	**2168168**
D	307m SE	Unspecified Tank	1909	2153142
D	308m SE	Pump House	1909	2168020
E	375m NW	Smithy	1896	2237290
E	382m NW	Smithy	1928 - 1946	2275023

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	10

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
3	**On site**	**Unspecified Tank**	**1971 - 1994**	**411348**
A	56m N	Unspecified Tank	1994	359268
A	88m N	Tanks	1994	374882
B	178m E	Unspecified Tank	1994	359269
C	207m NE	Unspecified Tank	1937 - 1994	400503
B	212m E	Unspecified Tank	1912	359272
C	216m NE	Unspecified Tank	1971	359270
C	220m NE	Unspecified Tank	1994	359271
D	306m SE	Unspecified Tank	1912 - 1937	384683
D	310m SE	Unspecified Tank	1994	359273

This data is sourced from Ordnance Survey / Groundsure.

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1.3 Historical energy features

Records within 500m	1

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
4	495m SW	Electricity Substation	1971 - 1994	264826

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

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1.6 Historical military land

Records within 500m	0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

2.1 Historical industrial land uses

Records within 500m 7

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Nurseries**	**1976**	**2168168**
2	**On site**	**Vineries**	**1957**	**2137983**
5	307m SE	Unspecified Tank	1909	2153142

ID	Location	Land Use	Date	Group ID
E	308m SE	Pump House	1909	2168020
F	375m NW	Smithy	1896	2237290
F	382m NW	Smithy	1946	2275023
F	382m NW	Smithy	1938	2275023

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	13

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Unspecified Tank**	**1971**	**411348**
A	**On site**	**Unspecified Tank**	**1994**	**411348**
B	56m N	Unspecified Tank	1994	359268
B	88m N	Tanks	1994	374882
C	178m E	Unspecified Tank	1994	359269
D	207m NE	Unspecified Tank	1937	408503
D	210m NE	Unspecified Tank	1994	408503
C	212m E	Unspecified Tank	1912	359272
D	216m NE	Unspecified Tank	1971	359270
D	220m NE	Unspecified Tank	1994	359271
E	306m SE	Unspecified Tank	1912	384683
E	306m SE	Unspecified Tank	1937	384683
E	310m SE	Unspecified Tank	1994	359273

This data is sourced from Ordnance Survey / Groundsure.

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2.3 Historical energy features

Records within 500m	2

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 18**

ID	Location	Land Use	Date	Group ID
G	495m SW	Electricity Substation	1994	264826
G	495m SW	Electricity Substation	1971	264826

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

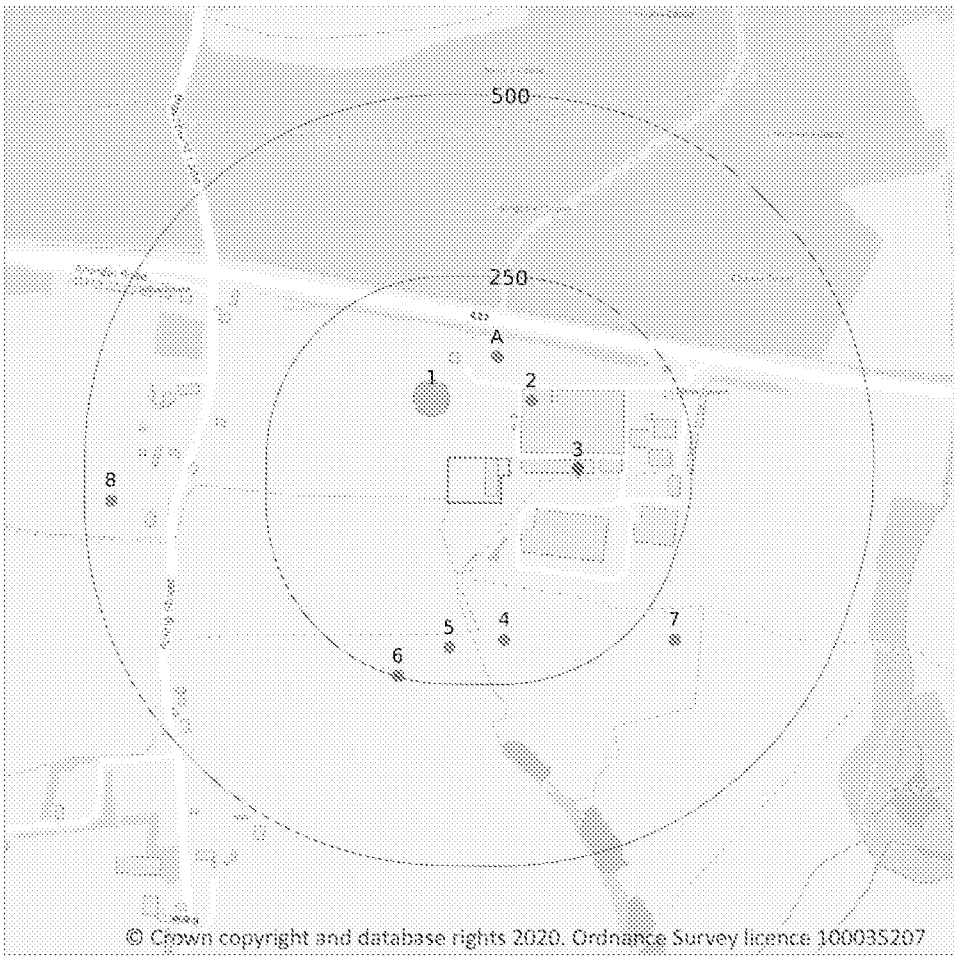
2.5 Historical garages

Records within 500m	0

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



Site Outline

Search buffers in metres (m)

Historical waste sites

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

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3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	0

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	1

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 21**

ID	Location	Address	Further Details	Date
1	59m N	Site Address: The Vinery, Arundel Road, Poling, ARUNDEL, West Sussex, BN18 9PY	Type of Site: Waste Transfer Buildings Planning application reference: A/37/08 Description: Scheme comprises construction of buildings to house in-vessel composting unit for green kitchen waste including maturation area, bio-filters, administration/canteen building and perimeter fence. Construction - fencing site works. An application (re 7/08) for detailed planning permission was granted by Arun D.C. Scheme is on hold The start date, contract period and project value are for guideline only. We have been advised that this scheme is on hold. The project status will be re-checked on a reg ular basis. Data source: Historic Planning Application Data Type: Point	-

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

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3.6 Licensed waste sites

Records within 500m	1

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 21**

ID	Location	Details		
3	93m E	Site Name: The Vinery Site Address: The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY Correspondence Address: -	Type of Site: Composting Facility Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SMA002 EPR reference: EA/EPR/LP3494SF/A001 Operator: Smart Waste Ltd Waste Management licence No: 10140 Annual Tonnage: 40000	Issue Date: 30/07/2007 Effective Date: - Modified: : - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	9

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 21**

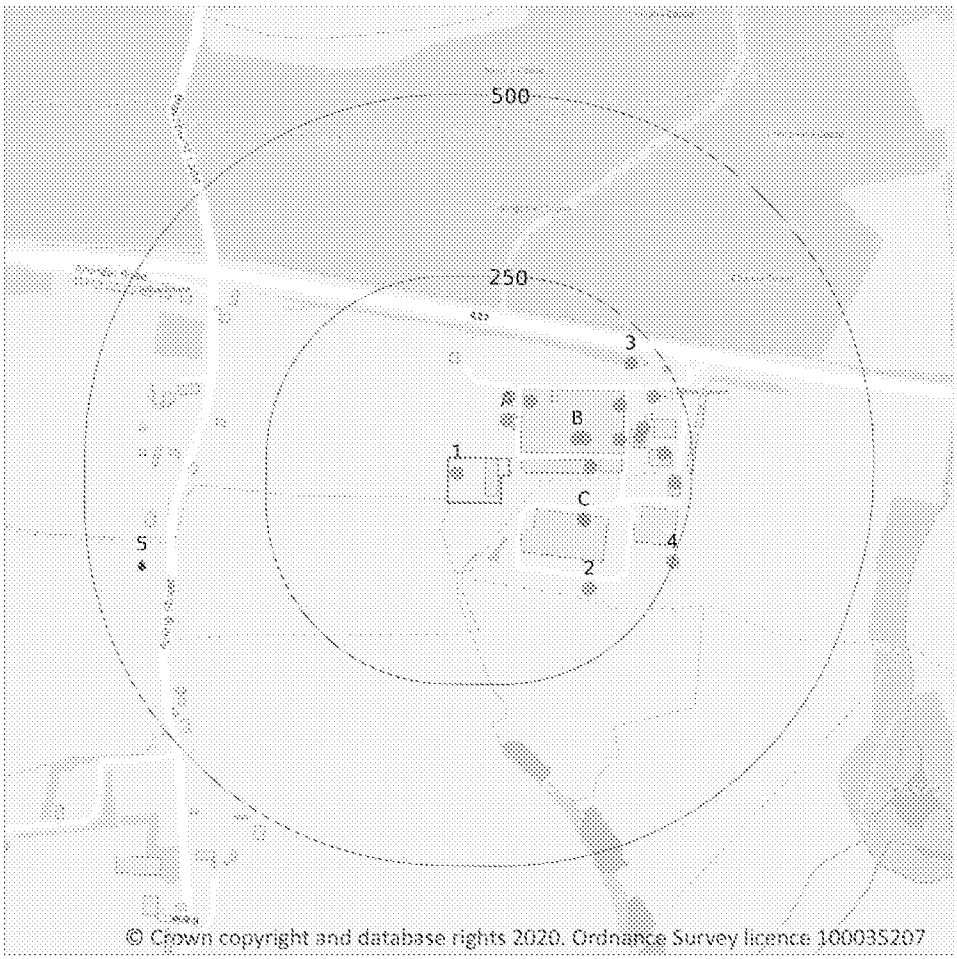
ID	Location	Site	Reference	Category	Sub-Category	Description
2	84m N	THE VINERY , ARUNDEL ROAD, POLING, ARUNDEL, BN18 9PY	WEX084799	Using waste exemption	Not on a farm	Use of waste in construction
A	139m N	-	WEX193377	Treating waste exemption	Not on a farm	Recovery of textiles
A	139m N	-	WEX193377	Storing waste exemption	Not on a farm	Storage of waste in secure containers
A	139m N	-	WEX193377	Storing waste exemption	Not on a farm	Storage of waste in a secure place
4	189m S	MANOR FARM POLING WEST SUSSEX BN18 9PT	EPR/HP0535WH/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge

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ID	Location	Site	Reference	Category	Sub-Category	Description
5	201m S	MANOR FARM POLING WEST SUSSEX BN18 9PT	EPR/LF0406VH/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge
6	250m S	Manor Farm Poling Street ARUNDEL West Sussex BN18 9PT	EPR/EE5256VG/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge
7	304m SE	MANOR FARM POLING WEST SUSSEX BN18 9PT	EPR/TF0035WC/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge
8	464m W	MANOR FARM POLING WEST SUSSEX BN18 9PT	EPR/TF0835WM/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of sludge

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Licensed Discharges to controlled waters

4.1 Recent industrial land uses

Records within 250m	19

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Company	Address	Activity	Category
1	**On site**	**Tank**	**West Sussex, BN18**	**Tanks (Generic)**	**Industrial Features**
A	53m N	Tank	West Sussex, BN18	Tanks (Generic)	Industrial Features
A	84m N	More Than Clearance Ltd	Unit 12 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Clearance and Salvage Dealers	Recycling Services

[redacted]

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ID	Location	Company	Address	Activity	Category
A	84m N	Tanks	West Sussex, BN18	Tanks (Generic)	Industrial Features
B	96m E	Goldmark Craft Beer	Unit 23 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Alcoholic Drinks	Foodstuffs
B	106m E	Option Hygiene South Ltd	Unit 24 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Cleaning Equipment and Supplies	Industrial Products
B	111m E	Tritec	Unit 44 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Electronic Equipment	Industrial Products
C	117m E	The Garden Superstore	Vinery Fields, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Garden Goods	Consumer Products
C	117m E	Fargro Ltd	Vinery Fields, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Industrial Repairs and Servicing	Repair and Servicing
B	153m E	Hammerpot Brewery Ltd	Unit 30 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Alcoholic Drinks	Foodstuffs
B	167m NE	Vinery Manageme nt	The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Container and Storage	Transport, Storage and Delivery
2	170m SE	Electricity Sub Station	West Sussex, BN18	Electrical Features	Infrastructure and Facilities
B	180m E	Wilcox & King Engineering Ltd	Unit 33 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Vehicle Repair, Testing and Servicing	Repair and Servicing
B	187m E	Tank	West Sussex, BN18	Tanks (Generic)	Industrial Features
3	211m NE	Tank	West Sussex, BN18	Tanks (Generic)	Industrial Features
B	211m E	Chandler Stoneworks	Unit 34 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Stone Quarrying and Preparation	Extractive Industries
B	215m NE	Tank	West Sussex, BN18	Tanks (Generic)	Industrial Features
B	226m E	Doga Stone	Unit 36 The Vinery, Arundel Road, Poling, Arundel, West Sussex, BN18 9PY	Stone Quarrying and Preparation	Extractive Industries
4	250m E	Mast (Telecommu nication)	West Sussex, BN18	Telecommunications Features	Infrastructure and Facilities

This data is sourced from Ordnance Survey.

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4.2 Current or recent petrol stations

Records within 500m	0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

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4.7 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m	0

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from Local Authority records.

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4.12 Radioactive Substance Authorisations

Records within 500m	0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	1

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 25**

ID	Location	Address	Details	
5	429m W	FAIRPLACE BARN, POLING STREET, POLING, ARUNDEL, WEST SUSSEX	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: P05009 Permit Version: 1 Receiving Water: INTO LAND	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: 13/09/1993 Effective Date: 13/09/1993 Revocation Date: 29/11/1993

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	0

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	0

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

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4.16 List 1 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	0

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	0

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution Inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution Inventory waste transfers

Records within 500m	0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m 4

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 32**

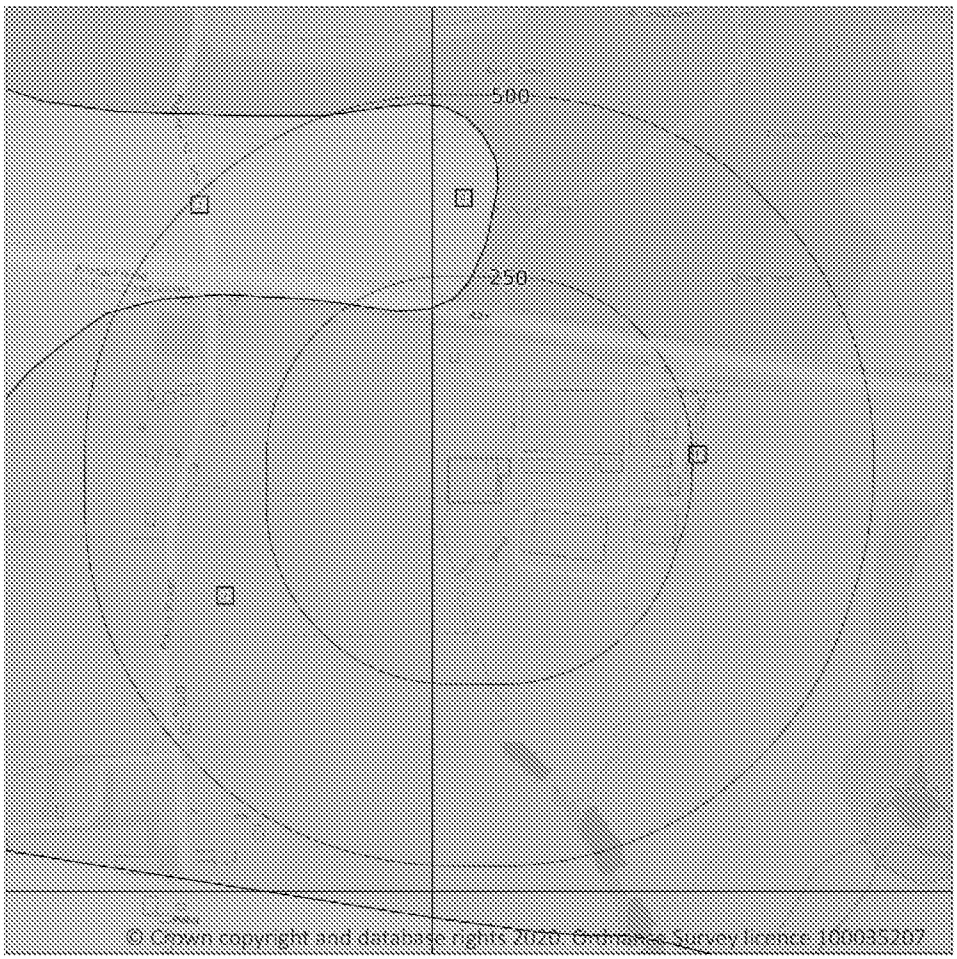
ID	Location	Designation	Description
1	**On site**	**Secondary A**	**Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers**
2	21m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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ID	Location	Designation	Description
3	208m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	356m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m 4

Aquifer status of groundwater held within bedrock geology.

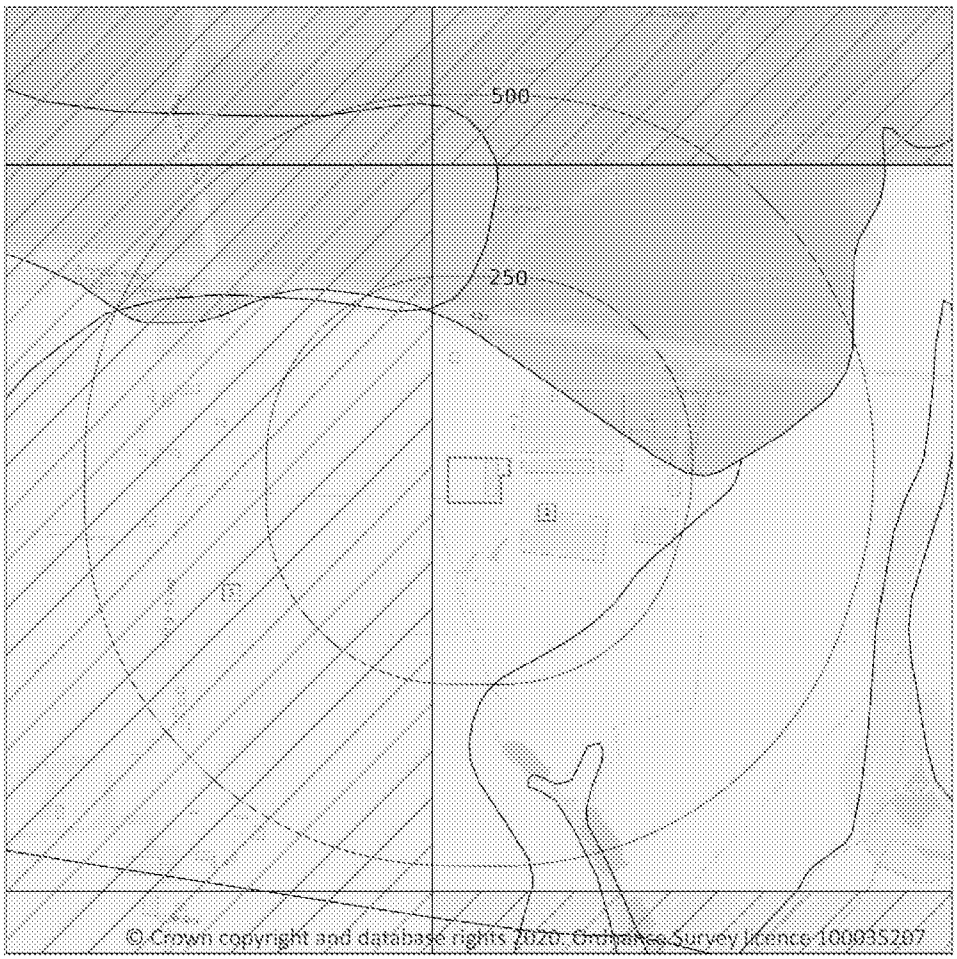
Features are displayed on the Bedrock aquifer map on **page 34**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	21m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

ID	Location	Designation	Description
3	206m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow
4	208m N	Unproductive	These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 36**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	**Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data**	**Vulnerability: High Aquifer type: Secondary Flow mechanism: Mixed**
3	21m W	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

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Abstractions and Source Protection Zones



Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	16

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

ID	Location	Details	
A	On site	**Status: Historical** **Licence No: 10/41/414024** **Details: Horticultural Watering** **Direct Source: Southern Region Groundwater** **Point: FORMER DARLINGTON MUSHROOM SITE POLING POINT 1** **Data Type: Point** **Name: Coleman** **Easting: 505030** **Northing: 105570**	**Annual Volume (m^3): -** **Max Daily Volume (m^3): -** **Original Application No: -** **Original Start Date: -** **Expiry Date: -** **Issue No: 101** **Version Start Date: 28/11/2003** **Version End Date: -**
A	On site	**Status: Historical** **Licence No: 10/41/414024** **Details: Spray Irrigation - Direct** **Direct Source: Southern Region Groundwater** **Point: FORMER DARLINGTON MUSHROOM SITE POLING POINT 1** **Data Type: Point** **Name: Langmead** **Easting: 505030** **Northing: 105570**	**Annual Volume (m^3): 59098** **Max Daily Volume (m^3): 364** **Original Application No: -** **Original Start Date: 15/03/1966** **Expiry Date: 31/03/2016** **Issue No: 103** **Version Start Date: 19/05/2011** **Version End Date: -**
B	153m E	Status: Historical Licence No: 10/41/414024 Details: Horticultural Watering Direct Source: Southern Region Groundwater Point: FORMER DARLINGTON MUSHROOM SITE POLING POINT 2 Data Type: Point Name: Coleman Easting: 505260 Northing: 105560	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 28/11/2003 Version End Date: -
B	153m E	Status: Historical Licence No: 10/41/414024 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: FORMER DARLINGTON MUSHROOM SITE POLING POINT 2 Data Type: Point Name: Langmead Easting: 505260 Northing: 105560	Annual Volume (m^3): 59098 Max Daily Volume (m^3): 364 Original Application No: - Original Start Date: 15/03/1966 Expiry Date: 31/03/2016 Issue No: 103 Version Start Date: 19/05/2011 Version End Date: -

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ID	Location	Details	
-	772m E	Status: Historical Licence No: 10/41/414103 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: DECOY COTTAGE POLING Data Type: Point Name: Langmead Easting: 505870 Northing: 105450	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 27/10/1980 Version End Date: -
-	839m SW	Status: Historical Licence No: 10/41/411101 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: EX-RADAR SITE AT POLING Data Type: Point Name: Langmead Easting: 504270 Northing: 105160	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/04/1987 Version End Date: -
-	940m SW	Status: Historical Licence No: 10/41/414013 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: MANOR FARM POLING Data Type: Point Name: Langmead Easting: 504630 Northing: 104680	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 02/04/1987 Version End Date: -
-	993m S	Status: Active Licence No: 24/066 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: OLD PLACE FARM Data Type: Point Name: F W Longhurst & Son Ltd Easting: 505370 Northing: 104580	Annual Volume (m^3): 18,184 Max Daily Volume (m^3): 1,400 Original Application No: - Original Start Date: 29/07/1996 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date: -
-	993m S	Status: Active Licence No: 24/066 Details: General Farming & Domestic Direct Source: Southern Region Groundwater Point: OLD PLACE FARM Data Type: Point Name: F W Longhurst & Son Ltd Easting: 505370 Northing: 104580	Annual Volume (m^3): 18,184 Max Daily Volume (m^3): 1,400 Original Application No: - Original Start Date: 29/07/1996 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date: -

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ID	Location	Details	
-	1284m SW	Status: Historical Licence No: 10/41/411010 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: CHURCH FARM LYMINSTER Data Type: Poly4 Name: Longhurst Esq Easting: 501260 Northing: 105330	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: - Expiry Date: - Issue No: 100 Version Start Date: 18/07/1979 Version End Date: -
-	1544m NE	Status: Historical Licence No: 10/41/310210 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 1 Data Type: Point Name: Southern Water Services Plc Easting: 505850 Northing: 106950	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 114000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 08/06/2009 Version End Date: -
-	1544m NE	Status: Active Licence No: 10/41/310210 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 1 Data Type: Point Name: Southern Water Services Ltd Easting: 505850 Northing: 106950	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 111,000 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 101 Version Start Date: 11/12/2009 Version End Date: -
-	1577m NE	Status: Historical Licence No: 10/41/310210 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 2 Data Type: Point Name: Southern Water Services Plc Easting: 506400 Northing: 106500	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 114000 Original Application No: - Original Start Date: - Expiry Date: - Issue No: 101 Version Start Date: 08/06/2009 Version End Date: -
-	1577m NE	Status: Active Licence No: 10/41/310210 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 2 Data Type: Point Name: Southern Water Services Ltd Easting: 506400 Northing: 106500	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 111,000 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 101 Version Start Date: 11/12/2009 Version End Date: -

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ID	Location	Details	
-	1708m N	Status: Active Licence No: 24/062 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: WARNINGCAMP BOREHOLE Data Type: Point Name: Southern Water Services Ltd Easting: 504590 Northing: 107250	Annual Volume (m^3): 1,825,000 Max Daily Volume (m^3): 5,000 Original Application No: - Original Start Date: 30/06/1995 Expiry Date: - Issue No: 100 Version Start Date: 16/06/2009 Version End Date: -
-	1818m SE	Status: Active Licence No: 10/41/414009 Details: Spray Irrigation - Direct Direct Source: Southern Region Groundwater Point: BLACK DITCH AT HAM MANOR GOLF CLUB Data Type: Point Name: Ham Manor Golf Club Ltd Easting: 505870 Northing: 103690	Annual Volume (m^3): 11,783 Max Daily Volume (m^3): 109.10 Original Application No: - Original Start Date: 07/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/03/2016 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	8

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

ID	Location	Details	
1	611m S	Status: Historical Licence No: 10/41/414014 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT MANOR FARM Data Type: Line Name: Langmead Easting: 503250 Northing: 104460	Annual Volume (m^3): 20548 Max Daily Volume (m^3): 916.5 Original Application No: - Original Start Date: - Expiry Date: 31/10/2006 Issue No: 101 Version Start Date: 01/04/2006 Version End Date: -

ID	Location	Details	
-	941m S	Status: Historical Licence No: 24/068 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: SIDE CHANNEL OF THE BLACK DITCH AT MANOR FARM POLING Data Type: Point Name: Keith Langmead Ltd Easting: 505164 Northing: 104596	Annual Volume (m^3): 55000 Max Daily Volume (m^3): 1000 Original Application No: - Original Start Date: 01/11/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 16/06/2009 Version End Date: -
-	941m S	Status: Active Licence No: 24/068/R01 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: SIDE CHANNEL OF THE BLACK DITCH AT MANOR FARM POLING Data Type: Point Name: Langmead Easting: 505164 Northing: 104596	Annual Volume (m^3): 49,500 Max Daily Volume (m^3): 1,000 Original Application No: - Original Start Date: 01/04/2016 Expiry Date: 31/03/2028 Issue No: 1 Version Start Date: 01/04/2019 Version End Date: -
-	947m S	Status: Historical Licence No: 24/068 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: SIDE CHANNEL OF THE BLACK DITCH AT MANOR FARM POLING Data Type: Point Name: Keith Langmead Ltd Easting: 505160 Northing: 104590	Annual Volume (m^3): 55000 Max Daily Volume (m^3): 1000 Original Application No: - Original Start Date: 01/11/2006 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 16/06/2009 Version End Date: -
-	1444m S	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Storage Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT HAM MANOR FARM RUSTINGTON Data Type: Line Name: Rustington Golf Centre Ltd Easting: 505620 Northing: 104130	Annual Volume (m^3): 31,822 Max Daily Volume (m^3): 1,500 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -

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ID	Location	Details	
-	1444m S	Status: Active Licence No: 10/41/414021 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT HAM MANOR FARM RUSTINGTON Data Type: Line Name: Rustington Golf Centre Ltd Easting: 505620 Northing: 104190	Annual Volume (m^3): 31,822 Max Daily Volume (m^3): 1,500 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2016 Version End Date: -
-	1987m SW	Status: Active Licence No: 10/41/411010 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: CHURCH FARM LYMINSTER Data Type: Poly4 Name: Longhurst Esq Easting: 501230 Northing: 105650	Annual Volume (m^3): 13,638 Max Daily Volume (m^3): 654.62 Original Application No: - Original Start Date: 01/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date: -
-	1992m SW	Status: Historical Licence No: 10/41/414020 Details: Spray Irrigation - Direct Direct Source: Southern Region Surface Waters Point: BLACK DITCH AT CHURCH FARM LYMINSTER Data Type: Line Name: Longhurst Easting: 501790 Northing: 104310	Annual Volume (m^3): 9092 Max Daily Volume (m^3): 654.62 Original Application No: - Original Start Date: 08/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2016 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	3

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 38**

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ID	Location	Details	
-	1544m NE	Status: Active Licence No: 10/41/310210 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 1 Data Type: Point Name: Southern Water Services Ltd Easting: 505850 Northing: 106950	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 111,000 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 101 Version Start Date: 11/12/2009 Version End Date: -
-	1577m NE	Status: Active Licence No: 10/41/310210 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: ANGMERING PS POINT 2 Data Type: Point Name: Southern Water Services Ltd Easting: 506400 Northing: 106500	Annual Volume (m^3): 26,000,000 Max Daily Volume (m^3): 111,000 Original Application No: - Original Start Date: 01/04/1969 Expiry Date: - Issue No: 101 Version Start Date: 11/12/2009 Version End Date: -
-	1708m N	Status: Active Licence No: 24/063 Details: Potable Water Supply - Direct Direct Source: Southern Region Groundwater Point: WARNINGCAMP BOREHOLE Data Type: Point Name: Southern Water Services Ltd Easting: 504590 Northing: 107250	Annual Volume (m^3): 1,825,000 Max Daily Volume (m^3): 5,000 Original Application No: - Original Start Date: 30/06/1995 Expiry Date: - Issue No: 100 Version Start Date: 16/06/2009 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

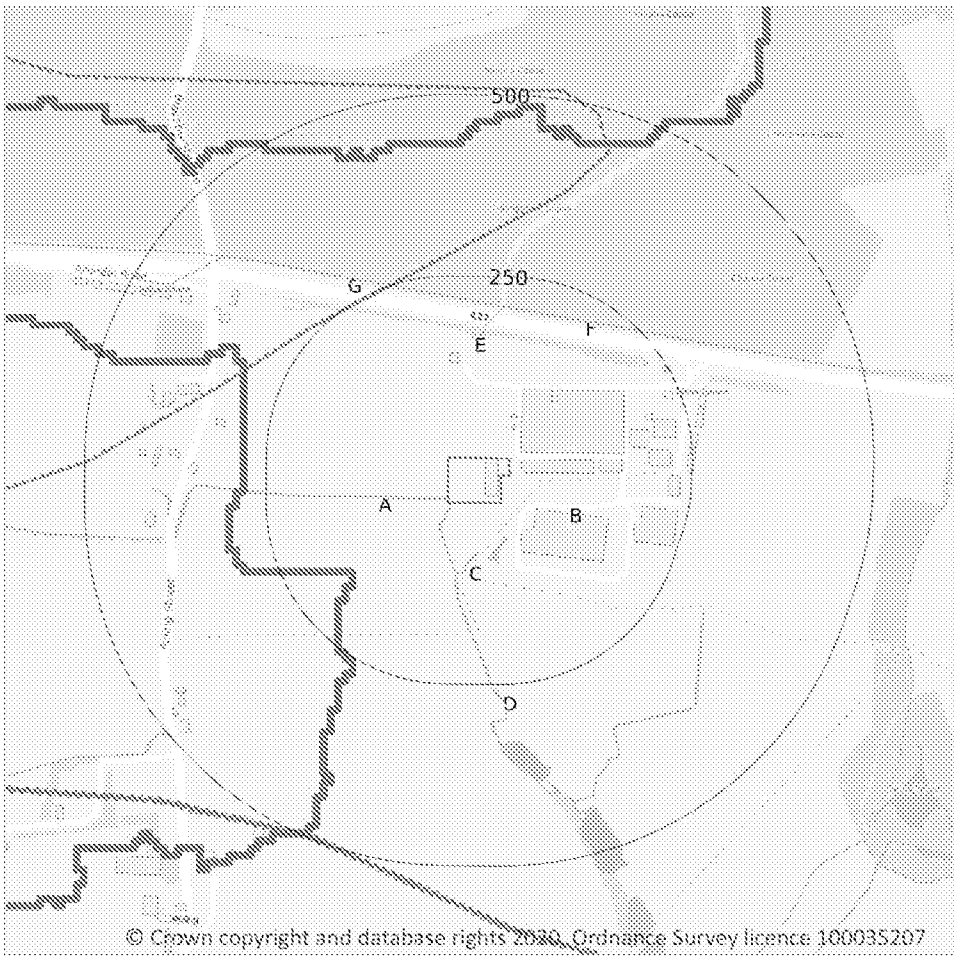
Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

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6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	9

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	On site	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
C	70m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	99m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	162m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	170m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
F	204m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	209m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	211m N	Inland river not influenced by normal tidal action.	Not provided	Watercourse contains water year round (in normal circumstances)	-
G	218m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	9

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 46**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
8	**On site**	**River WB catchment**	**Black Ditch (W Sussex)**	**GB107041012890**	**Lower Arun**	**Arun and Western Streams**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 46**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	1169m S	River	Black Ditch (W Sussex)	GB107041012890	Poor	Good	Poor	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 46**

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ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
8	On site	Sussex Lambeth Group	GB40701G505100	Poor	Good	Poor	2015

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

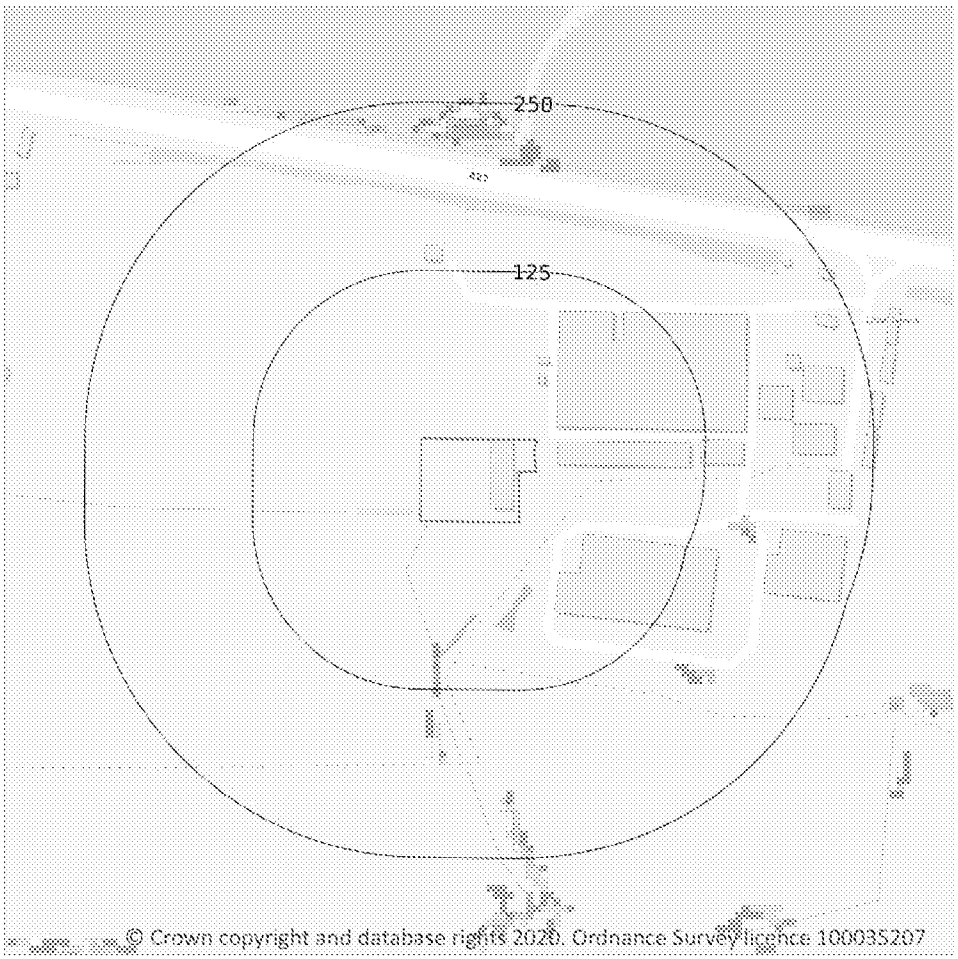
7.7 Flood Zone 3

Records within 50m	0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**Negligible**
Highest risk within 50m	**1 in 100 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 53**

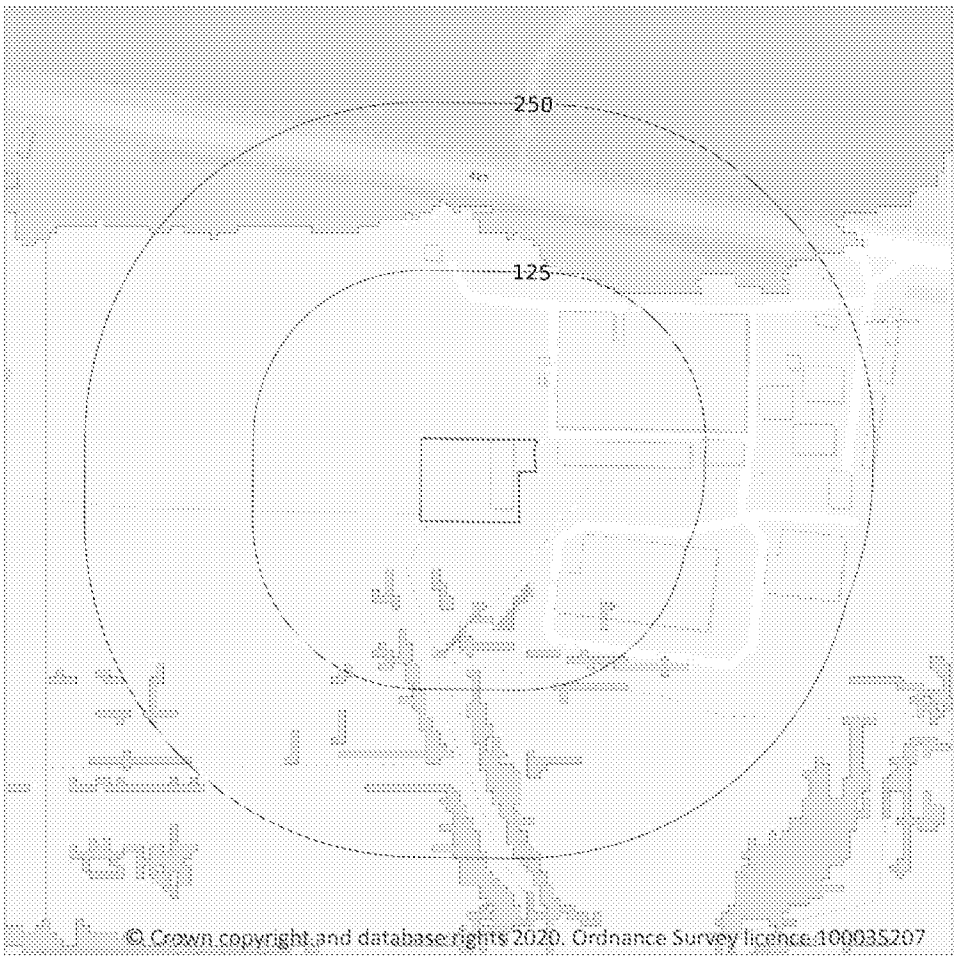
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site	**Moderate**
Highest risk within 50m	**Moderate-High**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 55**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



Site Outline

Search buffers in metres (m)

Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	14

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 56**

ID	Location	Name	Woodland Type
1	209m N	Unknown	Ancient Replanted Woodland
2	431m NW	Unknown	Ancient Replanted Woodland
3	636m SE	Decoy Pond Wood, Plat, The Lag, Poling Brook	Ancient & Semi-Natural Woodland
A	654m E	Charlow Furze Field, Lower Charlow, Pound Lane Co*	Ancient & Semi-Natural Woodland
4	718m NE	Unknown	Ancient & Semi-Natural Woodland
A	747m E	Pound Lane Coppice, Lower Charlow, Charlow Furze *	Ancient & Semi-Natural Woodland
5	867m E	Unknown	Ancient & Semi-Natural Woodland
6	904m W	Unknown	Ancient & Semi-Natural Woodland
7	1045m W	Unknown	Ancient & Semi-Natural Woodland
8	1091m NE	Unknown	Ancient Replanted Woodland
-	1448m W	Unknown	Ancient & Semi-Natural Woodland
-	1457m W	Unknown	Ancient & Semi-Natural Woodland
-	1610m NW	Unknown	Ancient & Semi-Natural Woodland
-	1761m NE	Unknown	Ancient & Semi-Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

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10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m	4

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	Sussex Chalk	Groundwater	G56	Changed

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Location	Name	Type	NVZ ID	Status
386m NE	Sussex Chalk	Groundwater	G56	Changed
929m W	Sussex Chalk	Groundwater	G56	Changed
1006m NW	Sussex Chalk	Groundwater	G56	Changed

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

Not recorded

Favourable

Unfavourable - Recovering

Unfavourable - No change

Unfavourable - Declining

Partially destroyed

Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 62**

ID	Location	Type of developments requiring consultation
1	On site	**Infrastructure - Airports, helipads and other aviation proposals.** **Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 750m² & manure stores > 3500t.** **Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion**

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

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11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	1

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

Features are displayed on the Visual and cultural designations map on **page 64**

ID	Location	Name	Data Source
1	200m N	South Downs	Natural England

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m	0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m	0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

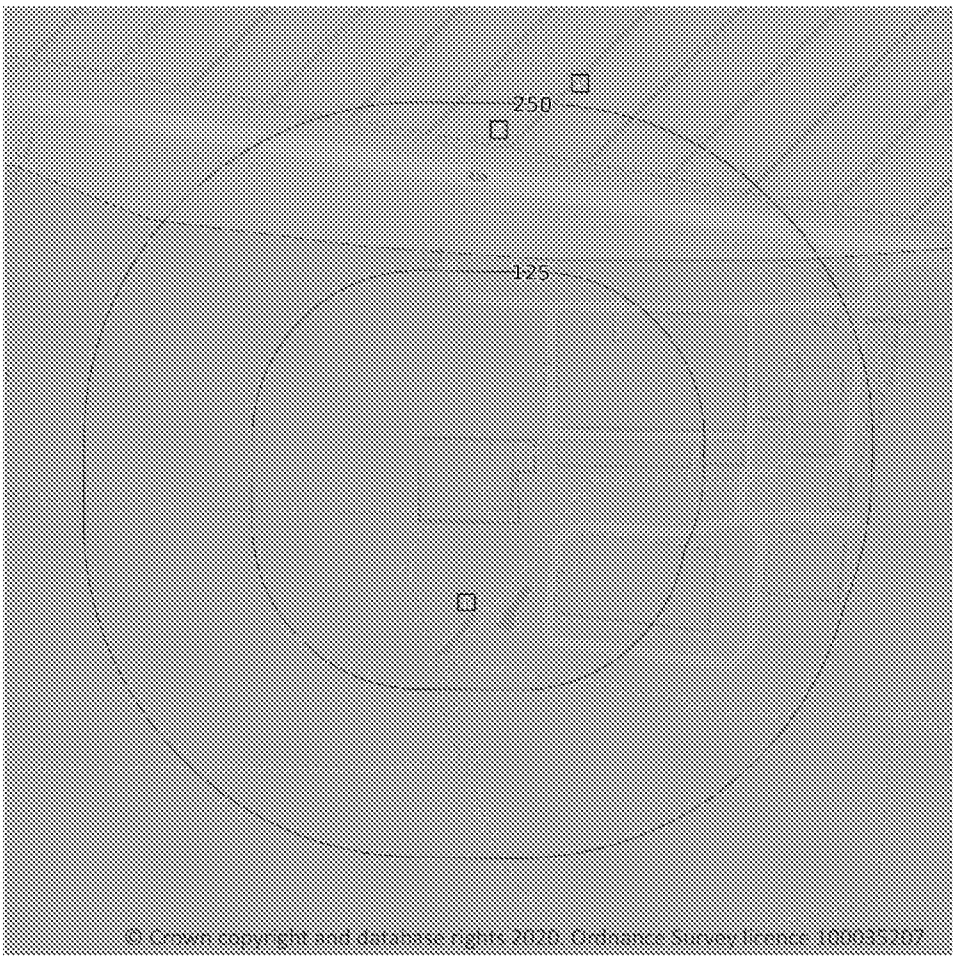
11.7 Registered Parks and Gardens

Records within 250m	0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from English Heritage, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	2

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 67**

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ID	Location	Classification	Description
1	On site	Grade 2	**Very good quality agricultural land. Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.**
2	135m N	Non Agricultural	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	1

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

Features are displayed on the Agricultural designations map on **page 67**

ID	Location	Description	Reference	Application date
3	209m N	Selective Fell/Thin (Conditional)	019/503/11-12	21/03/2012

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment.

This data is sourced from Natural England.

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12.5 Countryside Stewardship Schemes

Records within 250m	2

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

Location	Reference	Scheme	Start Date	End Date
On site	**513159**	**Countryside Stewardship (Middle Tier)**	**01/01/2018**	**31/12/2022**
209m NE	877766	Woodland Management Plan	01/04/2020	31/03/2022

This data is sourced from Natural England

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13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	4

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

Features are displayed on the Habitat designations map on **page 70**

ID	Location	Main Habitat	Other habitats
1	207m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	209m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	214m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	216m N	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m **2**

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 72**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	TQ00NE
2	21m W	Full	Full	Full	Full	TQ00NW

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground

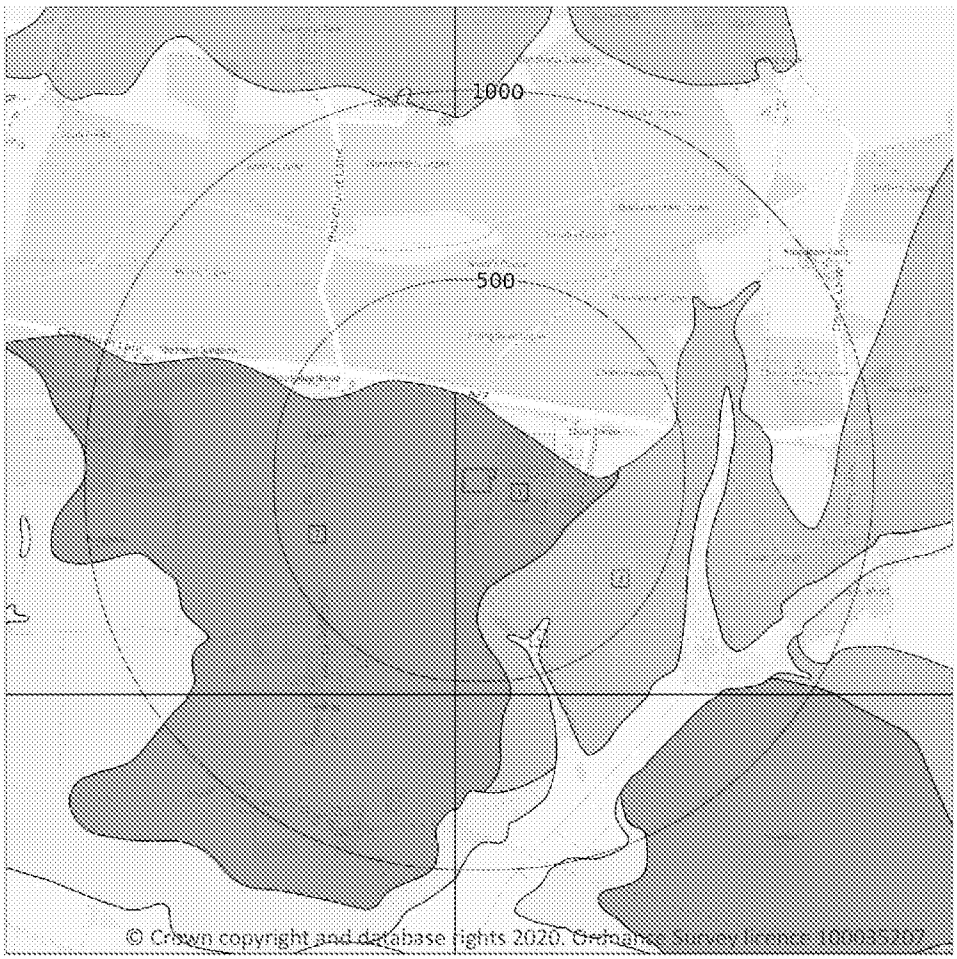
14.2 Artificial and made ground (10k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m **4**

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 74**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**BRK-Z**	**Brickearth - Silt**	**Silt**
2	21m W	BRK-C	Brickearth - Clay	Clay
3	214m SE	HEAD-DMTN	Head - Diamicton	Diamicton

[redacted]

ID	Location	LEX Code	Description	Rock description
4	363m SE	ALV-XSZC	Alluvium - Sand, Silt And Clay	Sand, Silt And Clay

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m 4

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 76**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**LMBE-CLAY**	**Lambeth Group - Clay**	**Paleocene Epoch**
2	21m W	RB-CLAY	Reading Formation - Clay	Paleocene Epoch
3	202m N	LC-CLAY	London Clay Formation - Clay	Eocene Epoch
4	202m N	LC-CLAY	London Clay Formation - Clay	Eocene Epoch

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This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	2

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

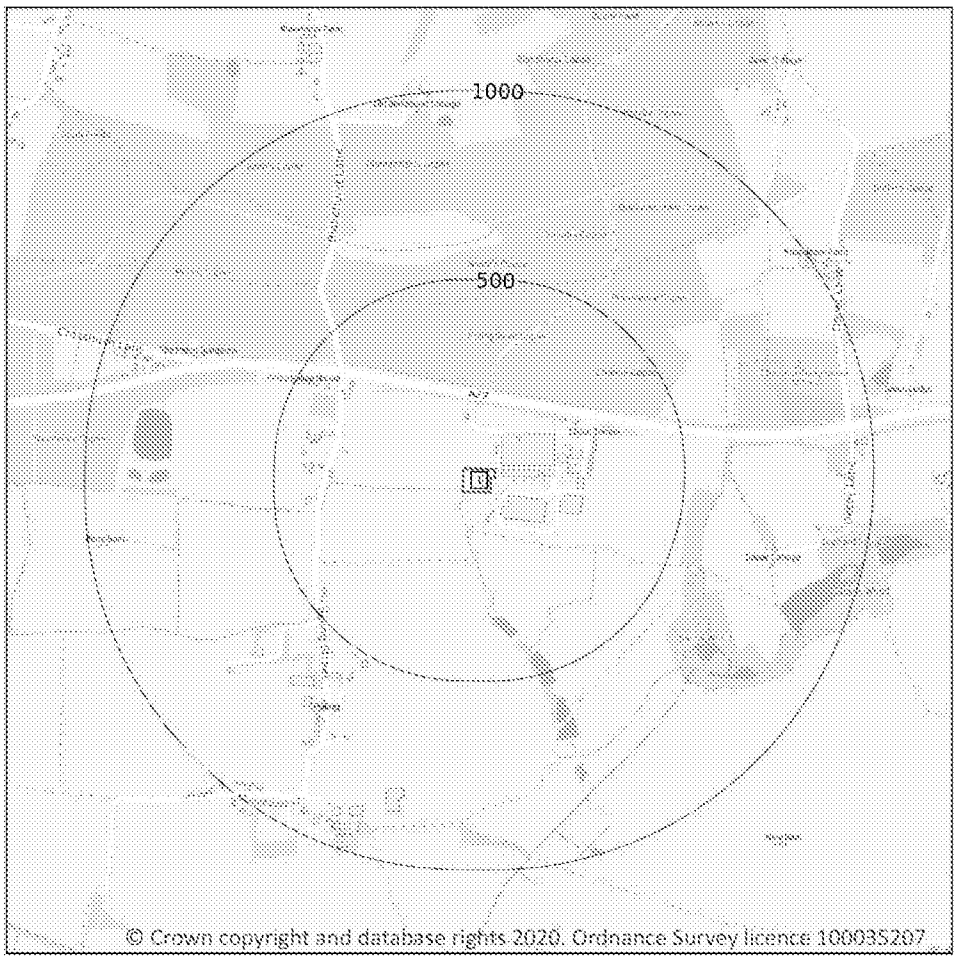
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 76**

ID	Location	Category	Description
5	286m N	FOLD_AXIS	Axial plane trace of major syncline
6	291m N	FOLD_AXIS	Axial plane trace of major syncline

This data is sourced from the British Geological Survey.

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15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 78**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW317_332_chichester_and_bognor_v4

This data is sourced from the British Geological Survey.

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Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m	0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

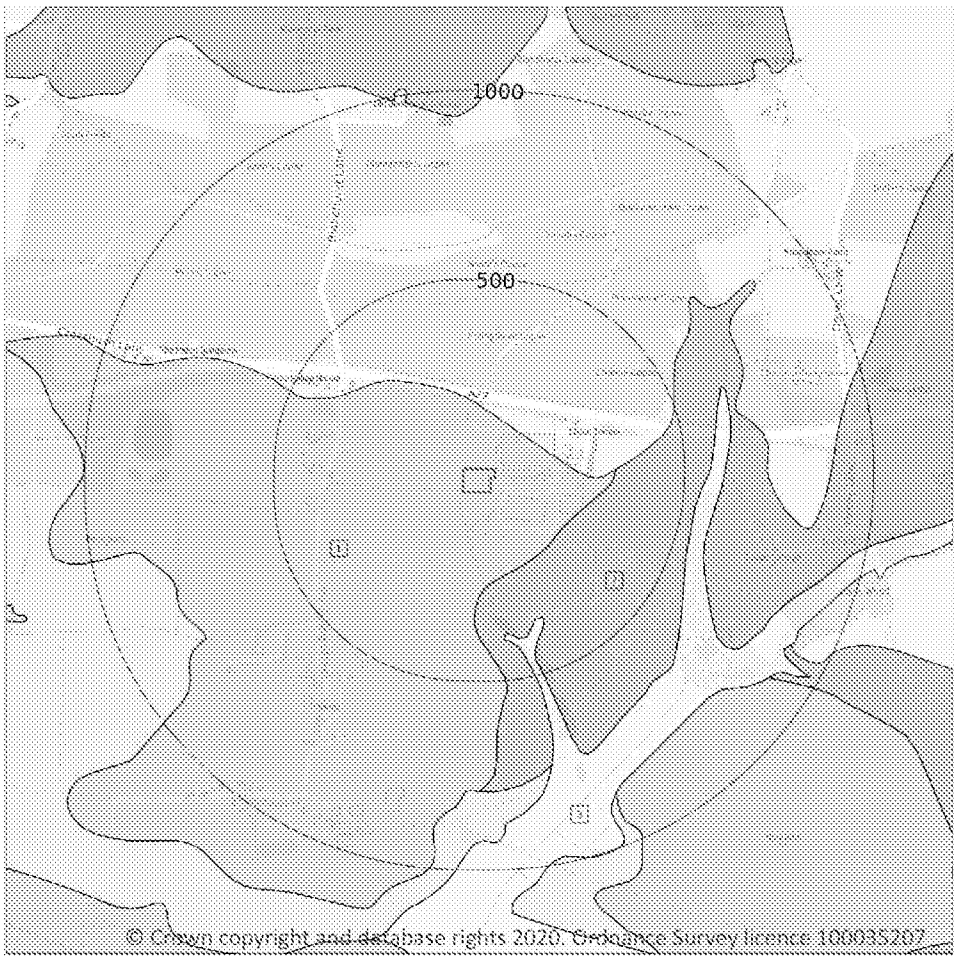
Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

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Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m 3

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 80**

ID	Location	LEX Code	Description	Rock description
1	On site	RTDU-XSZC	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND, SILT AND CLAY
2	208m SE	HEAD-XCZSV	HEAD	CLAY, SILT, SAND AND GRAVEL
3	356m S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	2

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**High**	**Low**
21m W	Intergranular	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

ARUN DISTRICT COUNCIL A/97/21/DOC

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m	2

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 82**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**LMBE-XCZS**	**LAMBETH GROUP - CLAY, SILT AND SAND**	**THANETIAN**
2	206m N	LC-XCZS	LONDON CLAY FORMATION - CLAY, SILT AND SAND	YPRESIAN

This data is sourced from the British Geological Survey.

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15.9 Bedrock permeability (50k)

Records within 50m	2

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**Moderate**	**Very Low**
21m W	Mixed	Moderate	Very Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	1

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 82**

ID	Location	Category	Description
3	284m N	FOLD_AXIS	Axial plane trace of major syncline

This data is sourced from the British Geological Survey.

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16 Boreholes



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	2

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 84**

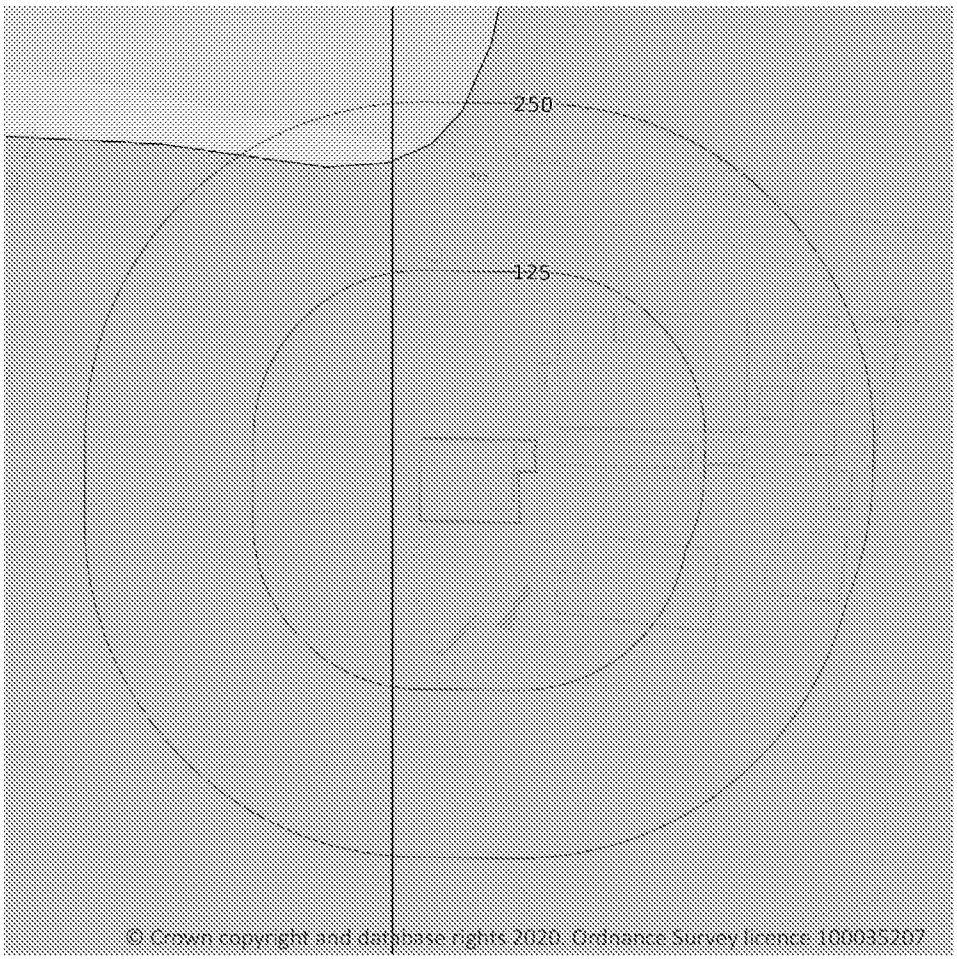
ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**505030 105570**	**WORTHING VINERIES POLING**	**55.77**	**N**	SS9682
2	153m E	505260 105560	WORTHING VINERIES POLING	60.96	N	SS9691

This data is sourced from the British Geological Survey.

[redacted]

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17 Natural ground subsidence - Shrink swell clays



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	2

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

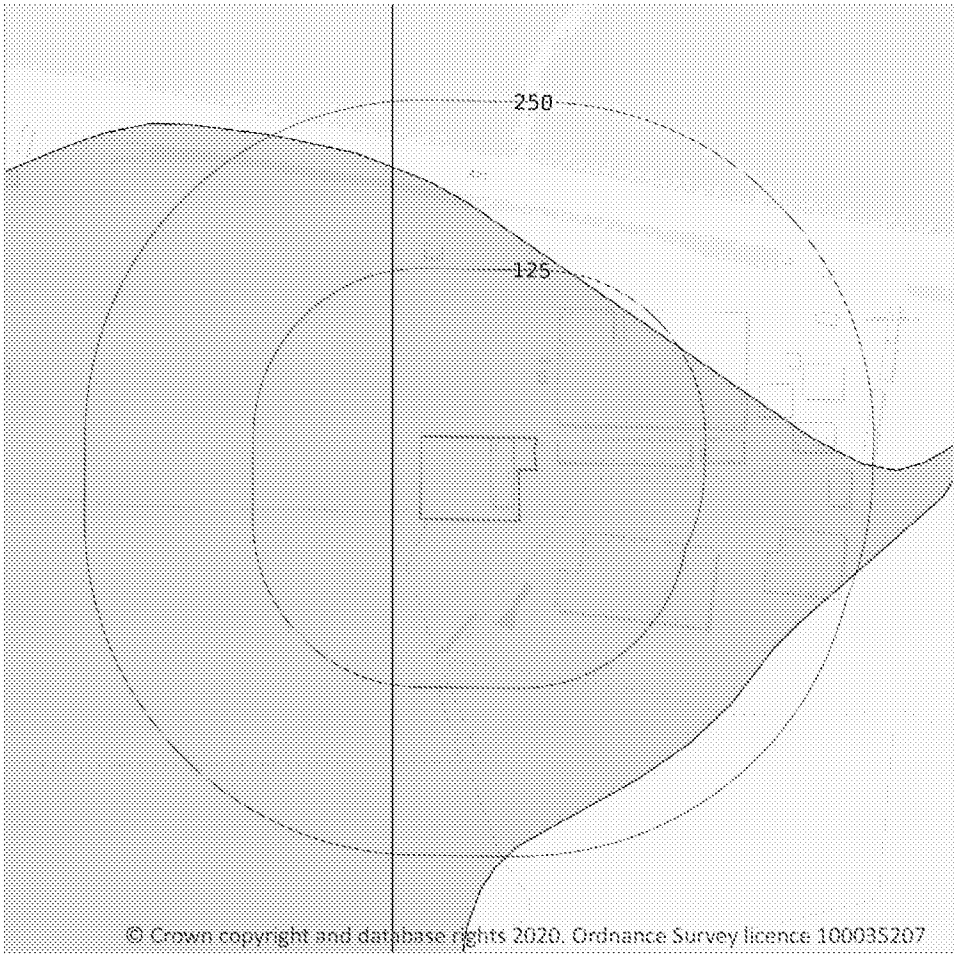
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 85**

Location	Hazard rating	Details
On site	**Moderate**	**Ground conditions predominantly high plasticity.**
21m W	Moderate	Ground conditions predominantly high plasticity.

This data is sourced from the British Geological Survey.

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Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	2

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

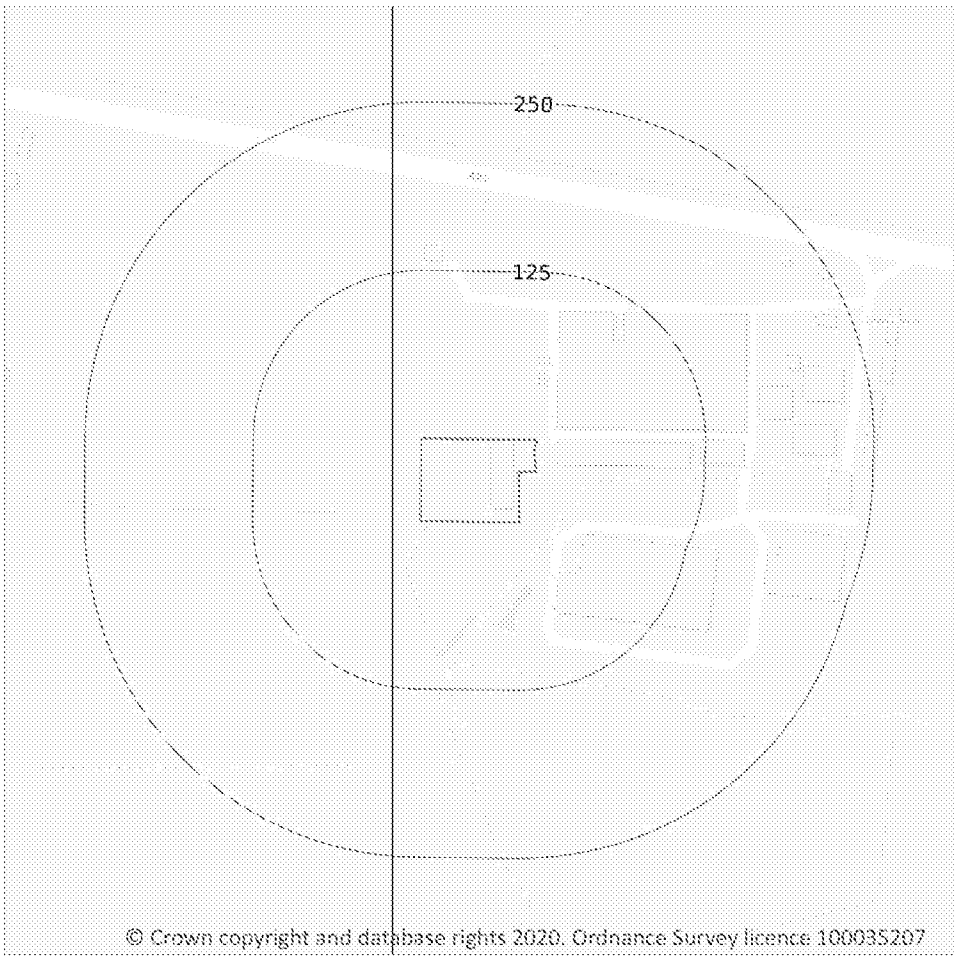
Features are displayed on the Natural ground subsidence - Running sands map on **page 86**

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

Location	Hazard rating	Details
21m W	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	2

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 88**

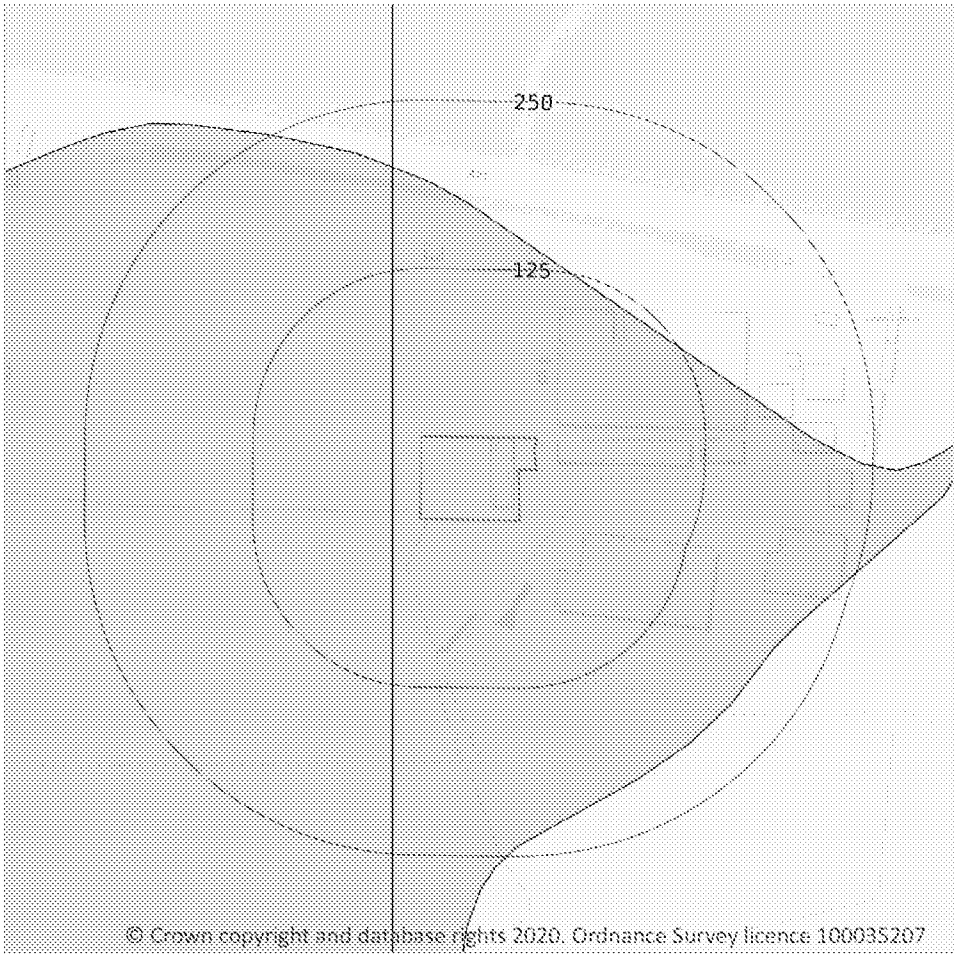
Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
21m W	Negligible	Compressible strata are not thought to occur.

This data is sourced from the British Geological Survey.

[redacted]

ARUN DISTRICT COUNCIL A/97/21/DOC

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	2

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 89**

Location	Hazard rating	Details
On site	**Low**	**Deposits with potential to collapse when loaded and saturated are possibly present in places.**
21m W	Low	Deposits with potential to collapse when loaded and saturated are possibly present in places.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

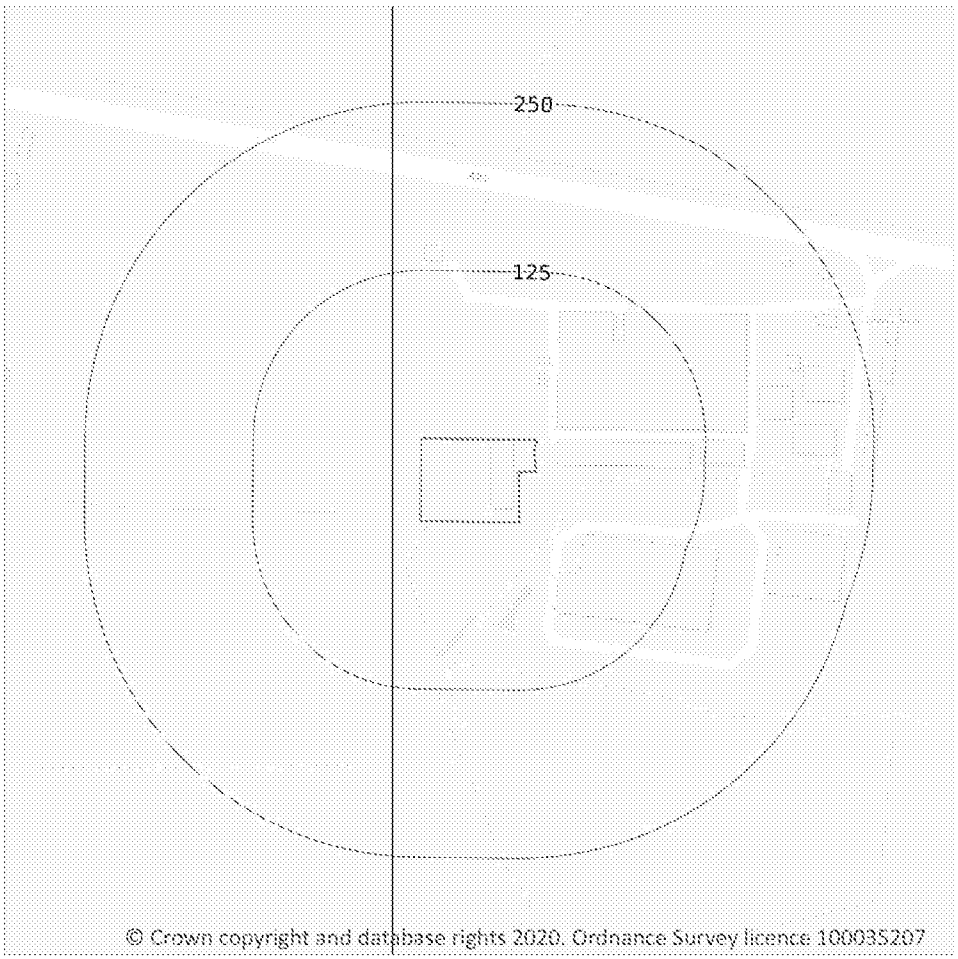
Features are displayed on the Natural ground subsidence - Landslides map on **page 90**

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
21m W	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	2

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 92**

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

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Location	Hazard rating	Details
21m W	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m	0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	0

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	1

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
3	427m W	Poling Pottery Works	Brick clay	Surface mineral working	Valid	Not available

This data is sourced from the British Geological Survey.

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18.6 Non-coal mining

Records within 1000m	5

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining, ground workings and natural cavities map on **page 94**

ID	Location	Name	Commodity	Class	Likelihood
1	**On site**	**Not available**	**Chalk**	**A**	**Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered**
2	21m W	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
4	486m N	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
5	537m S	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
6	560m S	Not available	Chalk	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Peter Brett Associates (PBA).

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18.8 JPB mining areas

Records on site	0

Areas which could be affected by former coal mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	0

Areas which could be affected by past, current or future coal mining.

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

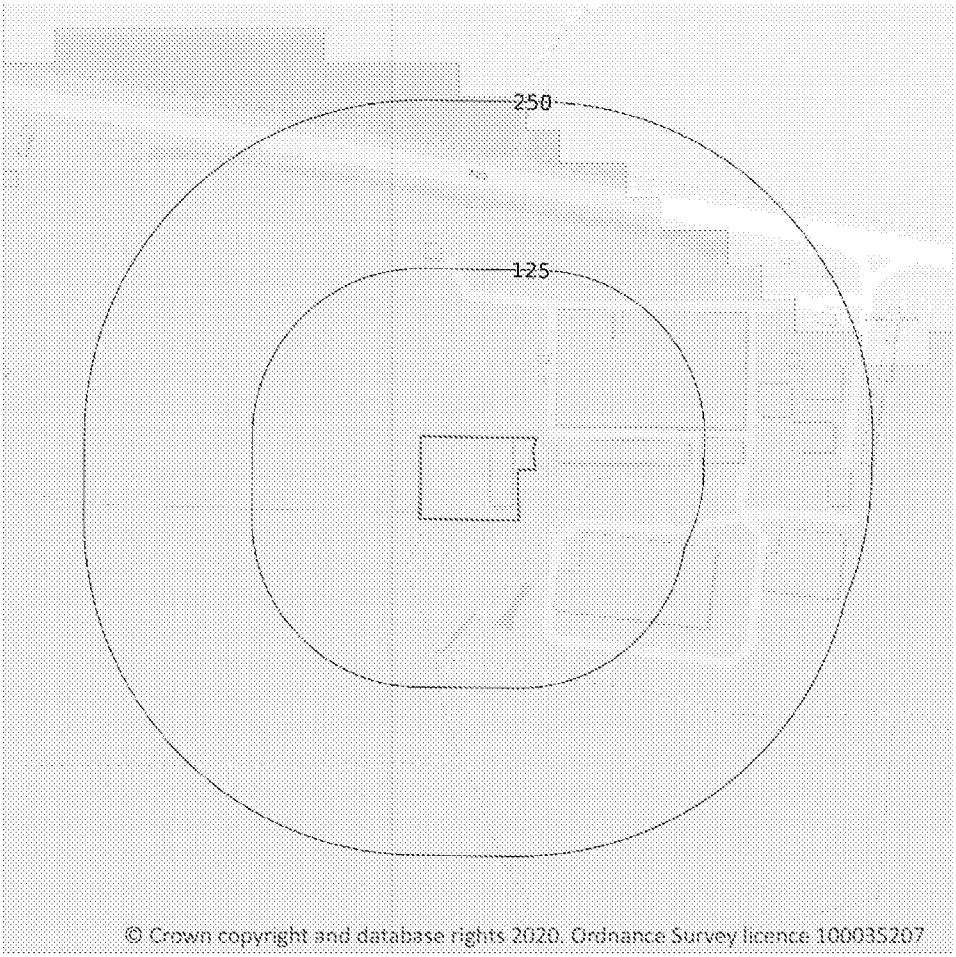
18.13 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 99**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Between 1% and 3%**	**None**

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	6

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**15 - 25 mg/kg**	**No data**	**100 mg/kg**	**60 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 - 30 mg/kg**
21m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
21m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
35m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
42m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
42m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

This data is sourced from the British Geological Survey.

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20.3 BGS Measured Urban Soil Chemistry

Records within 50m	0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects

21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	0

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see [redacted]

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this lin[redacted]

[redacted]